Annotated Bibliography, Intensive Mode Learning

Source	Year	Topic	Summary of findings	Discipline	Design	Sample size	Additional notes	Quality of evidence	Comparable to VU model
Scott, P. A. (2003). Attributes of high-quality intensive courses. *New Directions for Adult and Continuing Education*, *2003*(97), 29-38.	2003	Review of a few studies that look at how student's experience intensive courses, and factors that promote high quality student experiences	Four broad categories of factors identified as critical for a good student experience in accelerated models: instructor characteristics, teaching methods, classroom environment, and evaluation methods. - **Instructor characteristics:** enthusiasm; knowledge, experience and good communication; willingness to learn from and consult with students; have a student orientation. - **Teaching approach**: active learning; classroom interaction/discussion; experiential and applied learning; depth over breadth in content. Use of humour noted. - **Classroom environment:** close instructor-student and peer-peer relationships; relaxed, supportive, non-judgemental atmosphere encouraging participation with 10-30 students and comfortable environment. - **Evaluation:** Smaller assignments to suit shorter timeframe, alignment with course objectives, do not overload students with work, meaningful assignments, some degree of choice in assignments, and in-class group assignments preferred, avoid objective exams or avoid them altogether. - Student benefits (note most of these seem repetitious of the points above): - Focused Learning: - more focussed, uninterrupted learning on single subject. - less risk of investing more in certain subjects at expense of others. - greater sense of control over one's schedule. - More in-depth discussion: - enables more in-depth discussion, more time for learning as don't need to prepare for next class. - Emphasis on core concepts: - less focus on what student's considered 'extraneous material' - More memorable experience (due to the factors above). - Better/deeper classroom relationships: comfort, camradarie, classroom community. - Better atmosphere: more laid-back than traditional mode - Better performance: easier recall of information due to less time lapse - Students didn't procrastinate as much Without these factors, accelerated learning was reported as painful and boring.	Marketing	Review Article - prior evidence based on prior studies of comparative qualitative designs in marketing; included participation observation, interviews, and videotaping classes. Some students took more than one block at a time.	not stated	Scott did their PhD on intensives back in 1992, a lot of the evidence discussed here seems the result of their phd	Evidence mainly reflects student's self-reported preferences; seems biased towards promotion for intensive courses rather than research. No numbers are placed on the statements claimed (eg. How many students reported positive experiences), even though these should have been available in the data.	Some students took 2 blocks at once, and it's based in the US on marketing unit only. Also, intensives took place alongside traditional delivery

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Wlodkowski. R. J. (2003). Accelerated learning in colleges and universities. *New directions for adult and continuing education*, *2003*(97), 5-16.	2003	Brief review of the criticisms and some supportive evidence for effectiveness of accelerated programs	Accelerated courses are growing, in **particular in educational offerings aimed at working adults (25 years and older), and in religious education providers** (but most still in traditional unis) **Accelerated learning defined here actually reflects less contact time than the traditional** equivalent (e.g. 45 hours down to 20 hours) – not just delivered in a shorter duration. This also translates into less time required to attain the qualification. Accelerated learning courses are accused by some as prioritising convenience and profit over substance and rigour; crammed and poorly developed. Institutions offering them are often associated with having a mostly tenure-free and precarious workforce, and being for-profit rather than not-for-profit, using a more standardized curriculum, and employing academics who are also working in industry Lists types of evidence supporting their educational effectiveness: **Accreditation; Learning; Student Attitudes; and Alumni Attitudes** ○ noted no review of accreditation and accelerated programs as yet – and also matched comparative studies are limited ○ Refers to general research on time required for learning (a necessary but not sufficient component; mixed results) ○ Mentions some other recognised general/universal factors related to educational outcomes ○ Refers to some comparative studies that concluded accelerated learning had equivalent or better learning outcomes, satisfaction, than younger students in traditional programs; as well as in alumni (summarised below) ○ Graduation rates at six years are 40%, slightly higher than national average apparently for the US ○ Factors predicting graduation were: ▪ Significant prior college experience ▪ Grades ▪ Financial aid ▪ More available time ▪ Perceived good teaching and guidance quality ▪ Being female (2x graduation rate) ▪ Peer integration Note an important limitation**: studies of adults in accelerated learning are self-selected, and may be more prepared with more life experience for a compressed educational offering**.	Prior studies included economics, history, business	Review article – considers some criticisms and evidence in support of accelerated learning	N/A	There was a 'Center for the Study of Accelerated Learning' at Regis University, but it seems to be no longer in existence.	Review article – no primary evidence.	Accelerated courses here actually defined to represent shorter contact hours. Also, the studies refer to adult learning, typical student was 36 year old white female, married, working full time, with 15+ years of work experience.

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Davies. W. M. (2006). Intensive teaching formats: A review. *Issues in Educational Research*, *16*(1), 1-20.	2006	Review of evidence for comparable learning outcomes of accelerated learning	Mentions imperatives for major structural changes in Australian tertiary education sector. Notes existence of a body of studies on class time structures and learning – highlights that block format (longer held classes) is only used in secondary school at this stage, no studies as yet in tertiary. Delineates a range of intensive course structures, from whole-day sessions taught over 1-3 weeks, to night and weekend classes, to mixed modes. **Intensive teaching is most common in UK and Canada, in the discipline of business (mainly Economics and Commerce)** As at 2006, 320 identified US College courses offered in intensive mode (note 'course' in the US context refers to an Australian 'unit'). There is some basis of research in tertiary intensive modes. A reproduction of **tertiary comparative studies of delivery format is presented** (from Scott & Conrad, 1992), based on learning outcomes: - **12 conclude no difference** across traditional and intensive mode - **4 conclude intensives were superior** option - **1 concluded traditional was superior** 13 used quasi-experimental comparative study designs, and 5 were case studies. A similar, more recent review of the literature by Zelinna & Pablo (2005) classified study findings in a similar fashion, and concluded similarly (the source paper for this cannot be located and is not cited). Several limitations of the evidence are noted: - students are often self-selected which may bias a range of measures including attitudinal and assessment-based - students in intensives differ in age, experience and motivation; and no attempt to control for baseline characteristics is evident - no studies have yet attempted random assignment - long-term learning isn't assessed as yet Reviews arguments against intensive models: commodification of education, insufficient coverage of material. In favour of intensives: Time in a course is not a guarantee of T&L quality Faculty teaching intensive need be wary of: workload fatigue - insufficient time for reflection and analysis - cramming - curtailed and superficial content	All	Review article	N/A	Centre for Studies of Accelerated Learning referred to in the paper appears not to exist any longer	Review article – no primary evidence.	Intensive defined here as the same course offered in fewer contact hours. Defined as offering students flexibility – the option to choose and have mixed-modes.

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Source	Year	Topic	Summary of findings	Discipline	Design	Sample size	Additional notes	Quality of evidence	Comparable to VU model
Scott & Conrad. 1992. A critique of intensive courses and an agenda for research, Handbook of Higher Education.	1992	Systematic review of studies related to intensive learning	Seminal systematic review on intensive learning using ERIC and other databases (search terms unreported) **Research on the topic goes back to at least the 1960s** A preponderance of **case studies**, as well as a base of **comparative studies** that often have some comparability and design limitations**.** Categorised relevant studies into: - time and learning studies - comparative studies of educational outcomes - comparative studies of course requirements and practices - studies of student and faculty attitudes towards traditional and intensive Traces the **origin of intensives** to four distinct educational traditions: - **Summer sessions**, examples dating back to 1869 (Harvard) - **Interim sessions**, similar to block mode - intensive, single subject at a time – created for student flexibility as alternative to traditional semester, first noted in Florida Presbyterian College in 1961 - **Modular calendar systems**. Unclear distinction between interim – this also seems to refer to block mode delivery. First noted in Scio College in Ohio just after the US Civil War. Also Hiram College adopted the model (nine-week sequential blocks with an overarching block) for a period then reverted in 1958. Notes Colorado College, Martin College and Mount Vernon College provide contemporary examples. - **Language Acquisition Programs**. Developed during WW2, considered very successful. - **Weekend Programs**. For full-time working students, mostly 25-30 years old, proliferated in the 1980s. Richey et al (1965) actually compared results across student cohorts, and concluded most perform better in intensive than traditional **with exception of education students, and postgrad students with a low grade point.** The other relevant findings from this review paper are covered above.	all	Systematic review	100 articles identified	A good review but the data is a little dated		'Interim' and 'modular' seem most comparable in terms of single focus on a unit for a sustained period; but contact hours seem to be less than traditional equivalent.

Male, S., Baillie, C., Hancock, P., Leggoe, J., MacNish, C., & Crispin, S. (2017). Intensive mode teaching guide. OLT.
 	
Link to Guide
Link to Report
	2017	Summary of activities in an OLT intensive teaching project.
		
		Product of a nation-wide OLT project developing and applying threshold capability and concept
			- Intensive mode primary models reported were (% not reported):
			  - Two full day of classes following online prep
			  - One full-time week of classes
			  - **Two, three or four moderately intensive weeks of classes**
			  - A full day of classes once a week for seven weeks; or
			  - Five half days over a full semester
			- 52% of intensives were taught at both undergrad and postgrad levels
				Business and Engineering – unclear what other disciplines	Multiple phases:
					- Survey of 105 course coordinators
					- Exploratory and quantitative comparative study
						Varies:
						- 105 unit coordinators across Aus Uni sector in survey
						- 213 students and 10 teachers across 8
							Note seems to be a pre-published paper, presented at STARS	Even though this is a survey, figures are not placed against many of the claims reported
								
								e.g. how many unit coordinators of the n=105 reported it offers better
									Somewhat –
									
									Includes 3-4 week intensives.

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Source	Year	Topic	Summary of findings	Discipline	Design	Sample size	Additional notes	Quality of evidence	Comparable to VU model
		theory to intensive teaching delivery mode	- Most frequent reason for offering intensive mode: o so students could fit study among other activities (30%) o to promote engagement with interactive learning activities (25%) o **so students able to focus on one unit (10%)** o to facilitate travel required for teaching (9%) - 21st Century context reported as driver. - **Teacher's reported they saw benefits in:** o **Strong learning community** o **Retreat-like focus and immersion** o **Flexibility to incorporate long interactive activities** o **Continuity of learning (unclear)** o **Ability to incorporate real-world learning** o **More face-to-face time between teachers and students** o **Better for learning (in unspecified ways)** - **Students reported they liked:** o **Bonding and learning with peers** o **Focus on a single unit** o **Extended interactive activities** o **Continuity between learning, application and practice in one day** o **Hands-on and authentic activities** - **Risks to learning were identified as:** o **Exhaustion** o **Student failing to prepare for class or keep up** o **Lack of timely feedback to students between assessments** - Differences between intended and experienced curricula: o Interactive learning uncomfortable for some students o Time spent on more basic preparatory materials meant students missed out on threshold concepts - **Intentional curriculum design** is needed, particularly: o Teachers must ensure student's to engage early with threshold concepts o Ensure opportunities for engaging challenges to develop threshold concepts during class o **Use available data from your institution to inform improvements** - Student's review of the good teaching guide in intensives reported: o Design appropriate assessments o Manage workload carefully o Design an optimal learning space o Support students in their preparation o Design appropriate activities		- In-depth interviews with 6 teachers - Workshops to review a draft good teaching guide - Trial of application of the guide to improve an intensive unit - Survey of 27 students to review the guide	intensive units and 3 matched traditional units - 27 students reviewed the good teaching guide		learning experiences. In contact with the author requesting further detail	
Smith, J., Compston, P., Male, S, Baillie, C., & Turner, J (2016). Intensive mode teaching of a humanitarian	2016	Review of how well a case of intensive curriculum served the learning objectives,	Claim is made that intensive format enabled better learning – but these claims are based solely on other curricula features argued to be	Engineering – Humanities engineering	Case study, with quantitative student attitudes			Not relevant	Somewhat 4 week delivery

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Source	Year	Topic	Summary of findings	Discipline	Design	Sample size	Additional notes	Quality of evidence	Comparable to VU model
engineering course to enhance service-learning. International Journal for Service Learning in Engineering, Humanitarian Engineering and Social Entrepreneurship, 11(2), 38-54.		using a threshold capability framework	enabled by intensive learning, which are equally applicable to traditional mode delivery. For example, the service learning, visiting speakers, and site visit components. No further evidence pertaining to effects of delivery mode provided.		and threshold mapping				period corresponds, but additional 5th week for assessment completion

Kuiper, A., Solomonides, I., & Hardy, L. (2015). Time on task in intensive modes of delivery. *Distance Education*, *36*(2), 231-245.	2015	Teacher's perspectives on effective blended learning strategies in intensive units	Themes mostly take the form of recommendations of what has worked for the sample. These included:
			
			- Design
			  o Flexibility of structure to meet diverse student needs, particularly in student time use; modularised so students can study when it suits them
			  o Knowing the student's life context as it pertains to study, so that structure can encourage access and motivation
			- Encouraging commitment
			  o Get students started early via an early contact protocol, such as a series of emails or videos even, familiarised with the online environment before classes start
			  o Build in opportunities for early learning
			- Motivation
			  o Make expectations clear to students up-front
			  o Key activities and assessments used as critical touchpoints
			  o Have a clear progression structure in the content, from introductory to more advanced content
			  o Consider compulsory assessments in online discussion forums, albeit low weighting
			- Sequencing of assessment
			  o Scaffold and sequence assessments to avoid crowding
			  o Monitor student progress
			  o Use continuous assessment, where key concepts are incorporated across multiple assessments
			  o Keep in mind time constraints, promote succinct writing and choose resources that are brief
			- Technology
			  o Asynchronous learning offers flexible access of content
			  o Novel opportunities for engagement
			  o Use LMS features to speed up assessment feedback, and work with Ed Developers to design the unit and utilise additional features
			- Communication
			  o Some lecturers choose to be available 24/7 to students
			  o Have a strategy for regular communication, and make this clear to students
				History, general arts, business	Interviews with teachers and colleagues who utilised blended approaches as a way of managing intensive teaching; grounded theory framework	5 teachers of intensive distance or online units		Limited sample size of 5	Intensive defined here as a 'catch up' option for students who have failed or a fast-track option.
									
									Focus of study is on distance or heavily blended and online units

Kucsera, J. V., & Zimmaro, D. M. (2010). Comparing the effectiveness of intensive	2015	Comparative analysis of traditional vs intensive delivery	On a well-validated scale, while controlling for relevant baseline and course characteristics including workload, **students rated the overall**	Not stated	Quantitative, comparative study using validated scales, and	n=5 comparative cases with same instructor teaching traditional and		Moderate given lack of sample details and descriptives reported	Not really in terms of course duration:

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and traditional courses. *College Teaching*, *58*(2), 62-68.			**course significantly and moderately higher in intensive (9 week) vs traditional (15 week) delivery mode.** However, the proportion of overall variance explained in course ratings was small (10%). Class size and probable grade significant higher in intensives, indicating they had larger class sizes and also that students who tend to have a higher likelihood of success enrol in them.		controlling for baseline differences	matched summer/intensive unit; student data ranged from n=48-78 Details of the student sample are not reported (described as 'young')		Well validated measure was used (SETE), controls for baseline characteristics and course workload No outlier checks evident Small sample, single institution While teachers were not rated differently, SEM should be able to control for contemporaneous relationships between predictors (i.e. teacher ratings and course ratings)	Traditional semesters are 15 weeks long, and summer classes ranged from 5-9 weeks divided into 2 terms; or 11 weeks for a whole term
Eames, M., Luttman, S., & Parker, S. (2018). Accelerated vs. traditional accounting education and CPA exam performance. *Journal of Accounting Education*.	2018	Comparative analysis of intensive vs traditional mode delivery in performance on the CPA exam	According to descriptive statistics, alumni who undertook intensives were less likely to attempt the CPA exam than traditional students. Those intensive alumni who attempted the exam, passed more often (69% for summer course, 70% for weekend course, 64% for traditional students). A number of other factors that may affect performance on the CPA exam were included in the regression analysis where possible; including GPA during the program, age, whether their employing firm pays a bonus for completing the exam, possession of an advanced degree or other certification, and gender, and time since graduation. After controlling for those factors, no difference in exam attempts were statistically significant between traditional and accelerated; nor was a range of exam performance indicators.	Accounting majors	Survey of alumni, relied on recollections of attempting and passing the CPA exam	Alumni between Jan 2004 and Sep 2013. Total possible sample was 1008 traditional alumni and 847 accelerated alumni. Total responses were n=224 traditional, and n=284 accelerated		No attempt to control for other factors that may predict success in the exam; or test for self-selection factors influencing the decision to do an intensive unit.	Summer possibly, not the weekend course
Marques, J. (2012). The dynamics of accelerated learning. *Business Education & Accreditation,* 4(1), 101-112	2012	Theoretical review of pedagogical differences and evidence for accelerated learning	Theoretical review paper comparing accelerated learning to more traditional modes.						

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Austin, A. M., & Gustafson, L. (2006). Impact of course length on student learning. *Journal of Economics and Finance Education*, *5*(1), 26-37.	2006	Comparative analysis of difference course lengths on subsequent student performance	Austin and Gustafson (2006) analysed institutional data from the University of West Georgia comprising academic achievement records of 11, 795 students from 2001 to 2004. They compared 16 week semester units to intensives delivered over a variety of lengths. After controlling for a range of student demographics, educational readiness and study choice factors, and also some sensitivity testing including smoothing the distribution of student GPA using a transformation, results were robust in suggesting academic achievement was greatest at a course length of 4 weeks. For this analysis, ordinary least squares regression was utilised, with 4-week, 3-week and 8-week lengths entered as dummy variable predictors, compared against the 16-week length units as the reference group. All three shorter length courses significantly and positively predicted academic achievement, with similar effect sizes, but 4-week courses had the highest effect and were marginally greater than 3-week courses. They did not test whether year level, course or discipline moderated this finding. Assessment design was not controlled for in the study or probed as a mediator of increased grades, however, to explore whether improved results reflected lower assessment standards, the authors examined subsequent academic performance. In subsamples of directly linked units taken in sequence, in the topics of accounting, math, spanish language and economics, whether the prerequisite unit was completed in an intensive format did not significantly predict grades in the subsequent unit, even though actual past grades were a significant predictor of future grades. In other words, a unit being delivered as an intensive did not moderate the effect of prior grades, on future grades. Although students often had intervening units between the prerequisite and the follow-on, the authors controlled for by including it as a predictor in the model. This analysis suggests that academic achievement in intensive units is not 'dumbed down'.	Mixed		N = 11,795 students and 59,736 student*unit records from 2001-2004		The most thorough analysis approach of the effect of intensives on grades, so far. Does not use multilevel modelling to account for average grade differences in units, but does account for most student level variables.	

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Lutes, L., & Davies, R. (2018). Comparison of Workload for University Core Courses Taught in Regular Semester and Time-Compressed Term Formats. *Education Sciences*, *8*(1), 34. Dovetails on this earlier paper Lutes, L., & Davies, R. (2013). Comparing the rigor of compressed format courses to their regular semester counterparts. *Innovative Higher Education*, *38*(1), 19-29. Both arose from this PhD Link to the PhD	2018	Multi-disciplinary, mixed methods study of teachers, syllabi, and institutional student surveys in traditional vs fixed length courses at Brigham Young University.	Out-of-class workload was significantly lower in compressed (they use 'term' for compressed) summer units compared with traditional length units; on average by 54 minutes less per week. The 2013 paper analysed differences in total work (both in and out of class), and reported a significant but smaller difference, when using the matched instructor sample, of 17 minutes per week less work in the 'term' format. Teacher autonomy in setting homework had an influence on student out-of-class workload; with lower autonomy related to higher out-of-class workload, by about 19 minutes per week; instructor autonomy explained 10% of outside workload). Higher teacher autonomy was also associated with higher student ratings of the value of outside work (small overall variance explain of 7%) In the sylabbi coding, relatively few units showed major changes to syllabi, but changes included fewer graded assignments and more quizzes. Teachers reported some benefits of doing one subject at a time, particularly for memory recall performance, but deep learning and time to absorb information was a limitation of the compressed format. Many teachers, particularly those of reading and writing intensive-courses; but also biology, music, psychology and religion, reported that intensive did not work as well for them as the traditional semester model.	All	Mixed methods, interviews and survey of staff teaching compressed and intensive units, analysis of student data on workloads and satisfaction	Survey of 36 teachers 18 interviews 87 course syllabi 29000 student survey data on workloads and value of the work Student value of workload data is of uncertain origin judging from the paper – may be in the phd		Decent – statistical tests applied to workload variation, and value of workload variation. Conclusions regarding educational effectiveness is mainly on introspection / perspectives of teachers, but fairly well-informed and thoughtful. Mapping of syllabus wasn't detailed, applied a % of change, no interrater reliability of coding	The study compared summer to traditional model school
Heist & Taylor (1979). The Block Plan – A preliminary report on a ten-year evaluation of the Colorado college Block plan format for intensive study.	1979	Ten year review of the introduction of a block model to Colorado College	Fascinating and insightful historical review of the initiative to introduce block at Colorado College. A ten year evaluation with a comparison group to UC.	Liberal arts					