

2014

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Recommended Citation

O'Neill, S. C., & Stephenson, J. (2014). Evidence-Based Classroom and Behaviour Management Content in Australian Pre-service Primary Teachers' Coursework: Wherefore Art Thou?. *Australian Journal of Teacher Education*, 39(4).
<http://dx.doi.org/10.14221/ajte.2014v39n4.4>

This Journal Article is posted at Research Online.
<http://ro.ecu.edu.au/ajte/vol39/iss4/1>

Evidence-Based Classroom and Behaviour Management Content in Australian Pre-service Primary Teachers' Coursework: Wherefore Art Thou?

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Abstract: Beginning teachers often report feeling less than adequately prepared by their teacher education programs in the area of classroom and behaviour management (CBM). This article reports the prevalence of evidence-based practices in the coursework content on offer in Australian undergraduate primary teacher education programs. First a set of CBM practices supported by empirical research was established. Models of CBM in CBM courses and prescribed texts were then examined for the inclusion of these practices. We found that evidence-based practices in CBM were not commonly included in either models of CBM covered in courses, or in the prescribed texts used to support courses. The implications of this phenomenon on beginning teachers' knowledge and confidence in CBM are discussed.

Beginning teachers, locally and elsewhere, have long complained about the inadequacy of their pre-service preparation in the area of classroom and behaviour management (CBM) (Atici, 2007; Department of Education, Science & Training, 2006; Veenman, 1984), and it is one of the top two concerns of beginning teachers in Australia (Australian Education Union, 2009). A recent survey of Australian first-year-out primary teachers found that they felt only somewhat prepared to manage a range of problematic student behaviours based on their pre-service teacher coursework preparation (O'Neill & Stephenson, 2013). This dissatisfaction is supported by findings from the *Staff in Australian Schools* report (McKenzie, Rowley, Weldon, & Murphy, 2011), which reported that less than half of the beginning teachers surveyed felt their pre-service course had been helpful in preparing them to manage "a range of classroom situations" (p. 77).

Criticisms of teacher preparation in the area of classroom management are not unique to Australia. A recent review conducted by the National Council on Teacher Quality (NCTQ) suggested that teacher preparation programs in the USA "have become an industry of mediocrity, churning out first-year teachers with classroom management skills and content knowledge inadequate to thrive in classrooms with ever-increasing ethnic and socioeconomic student diversity" (NCTQ, 2013, p.1). Australian schools and their teachers are also facing the challenges of increasing student diversity, with more students with disabilities now enrolled in mainstream educational settings under the policy of inclusion (Ashman & Elkins, 2011). In Australia, problems in managing student behaviour have been linked to beginning teacher burnout, attrition, and intention to leave (Goddard & Goddard, 2006; McKenzie et al., 2011). Aside from the negative impacts on beginning teachers, poor

classroom management practices employed by beginning teachers can have serious impacts on the academic achievement of their students (Marzano, Marzano, & Pickering, 2003; NCTQ, 2013).

In this article, classroom and behaviour management (CBM) is defined as “the decisive, proactive, preventative teacher behaviours that minimise student misbehaviour and promote student engagement, and strategic, respectful actions that eliminate or minimise disruption when it arises, to restore the learning environment” (O’Neill & Stephenson, 2011, p. 35). This definition spans teacher behaviours that could be included in three out of the four major teaching functions described by Brophy (1998): classroom management (e.g., establishing rules and procedures), student socialisation (e.g., influencing students’ views), and disciplinary intervention (e.g., actions taken to stop misbehaviour). Instruction (e.g., presenting information), the first major function, Brophy asserted, was inextricably linked to classroom management. Engaging curriculum content, no matter how well designed, will not guarantee a lesson free from student misbehaviour; good classroom management skills are essential (NCTQ, 2013; Oliver, Wehby, & Reschly, 2011).

With problems in CBM an enduring issue for both experienced and beginning teachers (Evertson & Weinstein, 2006), researchers have sought to determine what practices should be advocated based on the available weight of scientific evidence (NCTQ, 2013). Rigorous research can provide teachers with the information they need to make considered decisions as to which CBM practices are likely to be effective and which are not (Marzano et al., 2003). As Cook, Tankersley, and Landrum (2009) cautioned, “All interventions are not equal; some are much more likely than others to positively affect student outcomes” (p. 366). Detrich and Lewis (2012) asserted that teachers (and students) should be informed about beneficial practices as well as being protected from the ineffective ones. For the purposes of this study, a practice is defined as a strategic action, method, process, or procedure (e.g., non-verbal gestures, class meetings, individual behaviour contracts).

Educational researchers have sought to define what constitutes evidence-based practice in general and special education (see for example Cook, Smith, & Tankersley, 2011; Cook et al., 2009; Gersten et al., 2005, Horner et al., 2005). There are varying criteria accepted by researchers and policy makers as to what is considered to be evidence-based (see Cook et al., 2009 for an excellent review on the similarities and differences in criteria included in definitions of evidence-based practice). Kerr and Nelson (2006) have developed useful criteria by which CBM practices may be judged as having an evidence-base. They proposed that studies, or groups of studies, could be regarded as providing reliable evidence about a practice if they demonstrated: “(a) the use of a sound experimental or evaluation design and appropriate analytical procedures, (b) empirical validation of effects, (c) clear implementation procedures, (d) replication of outcomes across implementation sites, and (e) evidence of sustainability” (p. 86).

Specific CBM practices are often conceptualised within the context of a larger theoretical or philosophical model. For the purposes of this study, a CBM model is defined as a set of practices that reflect a particular philosophy or theory about teachers’ and students’ roles in determining the level of freedom and control in the classroom and the practices by which those roles are achieved. Dozens of models for CBM have been described in the classroom management literature and these are commonly placed along a continuum (see for example Tauber, 2007), from those advocating most teacher control/power, such as *assertive discipline* (Canter & Canter, 1992), to least, such as *teacher effectiveness training* (Gordon, 1974). Research to assess the efficacy of CBM models, as compared to research on specific practices, has been rather limited. It is acknowledged that conducting research on classroom

management model effectiveness is problematic, with high integrity of model implementation by teachers in real classrooms difficult to achieve (Emmer & Ausiker, 1990).

Most theoretical models have yet to be shown to be effective (Brophy, 1988; Jones, 2006). *Applied behaviour analysis* (ABA) is the only model considered to have a strong evidence-base (Alberto & Troutman, 2013). *Positive behaviour intervention and support* (PBIS), which is rooted in ABA, is a *framework* for managing behaviour, and has a strong evidence-base established through a growing number of randomised control-trial studies (Maag, 2012). Kounin's *variables* were derived from correlational research rather than experimental research. Using ecological observation-based inquiry, Kounin was able to determine which teacher behaviours were positively correlated with increased on-task behaviours and reduced disruption for recitation and seatwork milieus (Kounin, 1970). Conversely, a popular classroom management model from the 1970s, assertive discipline (Canter & Canter, 1976, 1992), has been the focus of some research, but the evidence has been "either misleading, reported selectively, or altogether absent" (Maag, 2012, p. 2095). Research findings published by Emmer and Aussiker (1990) on the effectiveness of two other popular models, *reality therapy* (Glasser, 1986) and teacher effectiveness training (TET) (Gordon, 1974), have been mixed in the case of reality therapy, and yet to be proven in the case of TET due to poor research designs. Although most models may not yet be shown to be effective, they may contain specific practices that do have empirical research support (e.g., formation of rules).

With a growing body of information available to the teaching profession on evidence-based practices in CBM, and on a limited number of CBM models, it could be reasonably expected that those practices and models with research support would be routinely included in teacher education courses and in recently published texts aimed at pre-service teachers. Evidence of the inclusion of evidence-based practices and models in CBM-focused courses, locally or internationally, in published research literature, however, is scant (O'Neill & Stephenson, 2011, 2012a). Similarly, no assays of classroom management texts used in teacher education programs to assess the inclusion of evidence-based practices or models were located in the literature. The information that does exist on evidence-based practices and models in Australia has been gathered indirectly. For example, during an analysis of CBM course descriptions and outlines from all Australian undergraduate primary teacher education programs from publicly available tertiary institution websites, O'Neill and Stephenson (2011) reported that inclusion of specific evidence-based practices was low compared to the inclusion of theoretical models without a research base. In a follow-up study involving a survey of CBM course coordinators from 71% of primary teacher education programs in Australia, O'Neill and Stephenson (2012a) found that ABA and PBIS were commonly included in teacher education programs. ABA and PBIS, however, were only two of 36 CBM models reported by course coordinators, and only two of up to a dozen models (on average) included in a typical course. These findings suggest that little time might be spent on evidence-based models and practices, compared to consideration of unsupported theoretical and philosophical models. The dominance of theoretical models over research-based CBM practices has also been reported in US teacher education programs (see Banks, 2003; Blum, 1994; Stewart-Wells, 2000).

This study aimed to establish whether or not evidence-based *practices* were included in courses with CBM content and in the prescribed texts selected by course coordinators in Australian primary teacher education programs. To achieve the aim of this study, the following research questions were selected: (a) Which CBM practices reported in the literature, and included in CBM courses, have been shown to be

effective?, (b) Of the reported CBM models imparted in Australian primary teacher education programs, which models include evidence-based practices?, and (c) Of the CBM texts most commonly prescribed by course coordinators, which ones include evidence-based practices?

Method

Determining Effective Practices in Classroom and Behaviour Management (CBM)

Scores of CBM practices exist. Rather than attempting to establish the level of research support for all possible CBM practices, a broad list of common practices or strategies reported in the literature was required. In order to determine which CBM practices should be investigated, we used the 55-item Behaviour Management Strategies Scale (BMSS) (O'Neill & Stephenson, 2012b). This scale contains a selection of motivational, preventative, reductive, and communicative strategies/practices drawn from a variety of classroom management texts, from knowledge/skill statements for special educators, and from expert knowledge (See Table 1). In addition, all the behaviour management strategies listed in the BMSS were reported to be used at varying frequencies by the Australian beginning primary teachers surveyed by O'Neill and Stephenson (2013).

To establish the level of research support for each of the practices in the BMSS, we drew on seven sources: six books describing evidence and/or research-based practices in CBM written by experts in the field (Akin-Little et al., 2009; Cipani, 2008; Kerr & Nelson, 2006; Lane, Menzies, Bruhn, & Crnabori, 2011; Marzano et al., 2003; Sprick & Garrison, 2008) and a widely-cited review article on evidence-based classroom management practices (Simonsen et al., 2008). Each of the seven sources selected provided some level of explanation as to what the authors regarded as an evidence-based or research-based practice. Two sources (Cipani, 2007; Simonsen et al., 2008) used criteria that aligned closely with the criteria outlined by Kerr and Nelson (2006). Akin-Little et al. and Sprick and Garrison utilised criteria that are somewhat similar to those of Kerr and Nelson. The American Psychological Association guidelines used by Akin-Little et al. included evidence from the field and clinical observations in addition to quasi and randomised control experiments, but were not specific to CBM. Sprick and Garrison reported that each intervention (which commonly included a number of practices) met four prerequisites, which included multiple effectiveness studies. Although the authors did not indicate that a particular experimental design was required for effectiveness studies, empirical studies were included in their references. Lane et al. employed a system that classified the degree of support into three graduated levels for the practices they advocated: practice-based (the lowest level of support); grounded in research; and, at the highest level, evidence-based "...supported by scientifically rigorous studies" (p. 4). Marzano et al. utilised meta-analyses to synthesise research findings on classroom management components and reported effect sizes. Their advocated practices were those with large effect sizes. In educational settings, effect sizes greater than 0.6 are generally considered large (Hattie, 2009).

Each source was searched for material on each of the items in the BMSS. The strategy used was to search for each practice and for known synonyms of each practice within book indices, tables of contents, and chapter headings and sub-headings (see Table 1 for a listing of practices and synonyms used in the search). In searching books for supported practices, it was reasoned that if a practice was considered to be important and effective by the author(s), it would be listed in an index, in a table of contents, or be included as a chapter subheading. If the practice

was located, the pages describing the practice were read, and the level of research support was coded. Thus, each practice received a category rating from each of the seven sources.

Four classification categories of support were created: supported with research cited (SRC), advocated but no research cited (ANR), supported with cautions or conditions (SWC), and not shown to be effective by research (NSE). To be categorised SRC, the book's author(s) must have cited at least one supporting *empirical* study. The cited studies were retrieved and reviewed in each instance to establish whether or not they were empirical studies. ANR were practices that the author(s) advocated but did not cite any supporting empirical studies. SWC practices were those that the book's author(s) advocated as effective but noted conditions under which the practice may be ineffective. The final category, NSE, included those practices where the author(s) clearly stated there was a lack of research support. For the purposes of this study, a supported practice was one that had at least one source coded as SRC and at least three sources coded as ANR or SWC. The first author categorised each of the 55 practices listed in the BMSS in all seven sources. To establish reliability of the classification process, items in the BMSS were independently categorised by the second author using two sources and by a research assistant using one of the seven sources (42.9%). A good level of reliability was established, $k = .85$. Disagreements were resolved by discussion.

Following the identification of effective CBM practices, the 19 CBM models most frequently included in undergraduate primary teacher education programs, as reported by course coordinators (O'Neill & Stephenson, 2012a), were examined for the inclusion of these practices. Functional behavioural assessment was included as a model in the 2011 study, but was not examined in the current study, as it is an *assessment* process used in positive behaviour intervention and support (PBIS) (www.pbis.org). Although PBIS is described as a framework rather than a model, it includes research-based practices aimed at improving student behaviour and academic achievement (www.pbis.org) and was included as a model in the current study. An additional model, the *balance model* (Richmond, 2008), was included in the analysis for the present study as it represented a new Australian model and was nominated by two course coordinators in O'Neill and Stephenson (2012a).

For each model, the search strategy for locating practices included in the model was similar to the strategy used for categorisation of levels of support. Where possible, the original publication that explained the model (or its most recent revision, e.g., Canter & Canter, 1992) was located to increase the integrity of the practice analysis (see Tables 2 and 3 for the list of original sources analysed). If a practice was listed in the index, table of contents, or chapter headings or subheadings, the listed reference was checked to ensure that the practice described aligned with the evidence-based version of the practice (e.g., time-out for the purpose of calming down differs to time-out from positive reinforcement: the latter is an evidence-based practice; the former is not). For PBIS, keyword searches for practices were conducted within the pbis.org website search-tool window as there appeared to be no definitive text on PBIS advocated by that organisation. Where an index was not provided and the table of contents supplied contained broad headings (e.g., Glasser, 1986; Kounin, 1970), the book was skim read in its entirety. Where multiple publications existed for a model such as *control/choice theory*, the revised edition that best matched the classroom context was selected for analysis. Interrater reliability checking was independently conducted for seven of the 20 (35.0%) models by the second author and a research assistant. A high level of reliability was achieved, $k = .90$.

As part of a survey of convenors of CBM courses and an analysis of information on websites (O'Neill & Stephenson 2011, 2012a), publication details of

prescribed texts used in courses that contained CBM content had been collected. In total, 39 different texts were prescribed for courses with CBM content. A sample of twelve texts that had been reported as prescribed in two or more courses was analysed for the presence of practices supported as effective using the same method as reported for models (see Table 4 for the sources used). Of the 12 texts examined, seven were prescribed for courses that allocated more than 50% of instructional time to CBM content (considered as dedicated courses), and five were prescribed for courses where CBM was not the main focus of the course (considered as embedded courses). Two texts were prescribed for both dedicated and embedded courses. Where texts contained a specific chapter dedicated to classroom and behaviour management (e.g. Ashman & Elkins, 2009; Foreman, 2008; Groundwater-Smith, Ewing, & LeCornu, 2006; Marsh, 2008), the chapter was skim read in addition to checking the index, table of contents, and chapter headings and sub-headings. Interrater reliability on coding for presence of practices in the texts was completed for four texts (33%), with interrater reliability high, $k = .87$.

Results

Practices Supported as Effective

Of the 55 practices examined, 18 (32.7%) were found to have at least one source that cited an empirical study and at least three other sources that viewed the practice as effective. The use of positive verbal feedback (praise, encouragement, or acknowledgement), token economy, and forming and establishing rules were practices that achieved support from all seven sources as effective (see Table 1). Five practices were supported by six sources, but time-out from positive reinforcement was supported with caution (SWC) by four of the six sources. Readers were advised to avoid accidentally reinforcing escape-motivated behaviours with time-out. Tactical/planned ignoring was supported as effective by five sources, but three sources cautioned educators as to the difficulty of consistently using this practice. Two practices, social skills instruction and response cost, were supported as effective by the majority, but for each of these at least one source did not advocate it or stated a lack of research evidence existed to establish it as an effective practice. There were five practices supported by three of the seven sources: behavioural momentum, withitness, verbal redirections to the appropriate behaviour, Premack principle, and smoothness. Although these practices did not quite meet our criteria for inclusion at this time, they were included as they represent promising practices.

Practice	Level of research support				Synonyms
	SRC	ANR	SWC	NSE	
Token economy	3	4			points systems, token reinforcers/reinforcement, incentives, rewards, positive reinforcers/ reinforcement
Forming and establishing classroom rules	3	4			expectations, rights and responsibilities, code of conduct, guidelines, class goals, class structure
Praise, encouragement, positive feedback	2	5			acknowledgement, positive reinforcement, positive progress cues
Individual behaviour contracts	4	2			contracts, contingency contracts, formal agreements
Altering classroom structure/environment	2	4			environment, seating, furniture, room arrangement, classroom arrangement, organisation of the learning environment
Student self-monitoring and evaluation systems	3	3			self-evaluation, self-management
Group contingency (whole class incentives)	4	1	1		group positive reinforcement, group rewards or incentives, group contracts
Time-out from positive reinforcement	1	1	4		exclusion, time-away, seclusion
Teacher physical proximity/mobility	4	1			teacher movement, circulation, proximity control, teacher active supervision, non- verbal messages
Devising and teaching class routines	3	2			procedures, expectations
Tactical/planned ignoring	2		3		ignoring, extinction, mild punishment, withholding rewards, dealing with attention-seeking
Communicating clear behavioural/academic expectations	1	4			
Reprimands, correction statements, desists	3	1			verbal desists, stop statements, prompts, mild punishment, commands
Response cost	3	1		1	finest, penalties, mild punishment
Diagnosing underlying function	2	2			functional behavioural assessment, functional assessment, identifying goals/functions
Creating and using behaviour intervention plans	1	3			behaviour support plan, individual behaviour plan, behaviour improvement plan, behaviour management plan
Pre-corrections, cues, prompts (antecedent)	1	3			prompts, cues
Social skills instruction	1	3		1	social cueing skills instruction, social skills training

Note. SRC = supported with research cited, ANR = advocated but no research cited, SWC = supported with cautions or conditions, NSE = not supported as effective by research

Table 1. Practices supported as effective by sources (N=7) and level of research support

Models With Nine or More Practices Supported as Effective by Research

Of the 20 models examined, seven (35.0%) contained nine or more practices of the 18 categorised as effective (see Table 2 and 3). Of the top ten models reported to be included in undergraduate Australian primary teacher education programs by course coordinators in the study conducted by O'Neill and Stephenson (2012a), four contained nine or more supported practices (see Table 2), with PBIS containing all 18

practices and applied behaviour analysis (ABA) 15 practices. The most frequently included model in Australian pre-service primary teacher education programs, *decisive discipline* (Rogers, 2011) contained nine supported practices, with assertive discipline (Canter & Canter, 1992) containing nine. For the next nine most common models (see Table 3), three models contained nine or more supported practices with *positive classroom discipline* (Jones, 1987) containing 12; the *ecological model* (Arthur-Kelly et al., 2006) nine; and the recent Australian model, the balance model (Richmond, 2008), 11.

Classroom Management Prescribed Texts with Nine or More Supported Practices

Six of the 12 (50%) prescribed texts examined contained nine or more of the 18 practices categorized as effective (see Table 4). Four of the six were prescribed texts for dedicated CBM courses. Of these four, two texts (Zirpoli, 2007 and Konza et al., 2003) clearly attributed their practices to a couple of models. Zirpoli (2007) focused mainly on ABA, but did include self-monitoring as a *cognitive behaviour approach* (CBA). Konza et al. (2003) explicitly mentioned *dealing with the group* (Redl & Wattenberg, 1951) when discussing setting high expectations and *goal-centred theory* (Dreikurs, Grunwald, & Pepper, 1982) when discussing tactical ignoring. The other two texts prescribed in dedicated courses, with nine or more supported practices, presented multiple models (see Table 4). Edwards and Watts (2004) included eight models, and Porter (2007) included six. Practices supported as effective tended to be concentrated in a few chapters. For Edwards and Watts (2004), six of the 12 (50%) supported practices were found in the chapter on ABA, and three were found solely in this chapter. For Porter (2007), 11 of the 12 (91.2%) supported practices in this text were located in the chapters on ABA or CBA, with six of the 12 (50.0%) practices only found in these chapters (see Table 4). Three of the seven texts (42.9%) prescribed in embedded courses contained nine or more of the supported practices (see Table 4). Of these, two were texts prescribed for courses designed to educate teachers about the inclusion of students with diverse educational needs into their classrooms (Ashman & Elkins, 2009; Foreman, 2008).

	Decisive discipline (Rogers, 2011)	Applied behaviour analysis (Alberto & Troutman, 2013)	Choice theory (Glasser, 2001)	Assertive discipline (Canter & Canter, 1992)	Goal-centred theory (Dreikurs et al., 1982)	PBIS (www.pbis.org)	Variables (Kounin, 1970)	Restitution (Gossen, 1993)	Democratic teaching (Balson, 1988)	Teacher effectiveness training (Gordon, 1974)
Token economies		X		X		X		X		
Forming and establishing classroom rules	X	X	X	X	X	X		X	X	X
Praise and/or encouragement, positive feedback	X	X		X	X	X	X	X	X	X
Individual behaviour contracts		X				X				
Altering classroom structure/environment	X	X				X				X
Student self-monitoring and evaluation systems		X				X				
Group contingency (whole class incentives)		X		X		X		O		
Time-out from positive reinforcement		X				X				
Teacher physical proximity/mobility	X			X		X	X			
Devising and teaching class routines	X	X		X	X	X				X
Tactical/planned ignoring	X	X			X	X		X	X	
Communicating clear behavioural/academic expectations		X		X		X		X		
Reprimands, correction statements,	X			X		X	X			O

desists										
Response cost		X				X		O		
Diagnosing underlying function		X			X	X			X	
Creating and using behaviour intervention plans	X	X		X		X				
Pre-corrections, cues, prompts (antecedent)	X	X				X				
Social skills instruction						X				
Total number of practices included	9	15	1	9	5	18	3	5	4	3
Frequency of inclusion of model										
Dedicated courses	79.0%	79.0%	73.7%	68.4%	68.4%	57.9%	52.6%	52.6%	52.6%	52.6%
Embedded courses	50.0%	33.3%	46.7%	46.7%	33.3%	46.7%	46.7%	36.7%	30.0%	13.3%

Note. X indicates that the practice was included and advocated (sometimes with conditions) by the model's authors, O indicates that the practice was explicitly not advocated. Numbers in bold indicate models that had nine or more supported practices.

Table 2. First To Tenth Most Commonly Included CBM Models Mapped For Effective Practices

	Positive classroom discipline (Jones, 1987)	Ecological approach (Arthur-Kelly et al., 2006)	Social learning theory (Bandura, 1977)	Plan-teach-evaluate (Barry & King, 1988)	Dealing with the group (Redl & Wattenberg, 1951)	Self-reflective teaching (Good & Brophy, 2000)	Congruent communication (Ginnott, 1972)	Developmental approach (Lewis, 2008)	Discipline with dignity (Curwin & Mendler (2001)	Balance model (Richmond (2008)*
Token economies	X		X	X				X		
Forming and establishing classroom rules	X	X		X	O	X	X	X	X	X
Praise and/or encouragement, positive feedback	X	X	X	X	X	X	X	X	X	X
Individual behaviour	X					X				X

contracts										
Altering classroom structure/environment	X	X								X
Student self-monitoring and evaluation systems		X	X							X
Group contingency (whole class incentives)	X				X		X			
Time-out from positive reinforcement	X						O		X	X
Teacher physical proximity/mobility	X	X		X		X			X	X
Devising and teaching class routines	X	X		X		X			X	X
Tactical/planned ignoring	X			X	X					X
Communicating clear behavioural/academic expectations		X		X		X			X	X
Reprimands, correction statements, desists				X		X	O	O		X
Response cost	X						O		X	
Diagnosing underlying function		X								
Creating and using behaviour intervention plans	X									
Pre-corrections, cues, prompts (antecedent)										X
Social skills instruction					X					
Total number supported	12	9	3	8	3	8	2	7	5	11
Frequency of inclusion of model										

Dedicated courses	47.4%	47.4%	42.1%	36.8%	36.8%	31.6%	21.1%	15.8%	15.8%	5%
Embedded courses	33.3%	26.7%	30.0%	40%	23.3%	40.0%	6.7%	13.3%	10.0%	0%

Note. X indicates that the practice was included and advocated (sometimes with conditions) by the model’s authors, O indicates that the practice was explicitly not advocated. Numbers in bold indicate models that had nine or more supported practices.

Table 3. Eleventh to nineteenth most commonly included CBM models mapped for effective practices

Practice	Prescribed text in dedicated courses					Prescribed text in dedicated and embedded courses		Prescribed text in embedded courses				
	Zirpoli (2007)	Porter (2007)	Porter (2008)	Konza et al. (2003)	Brady and Scully (2005)	Arthur-Kelly, et al. (2006)	Edwards & Watts (2004)	Groundwater-Smith et al. (2008)	Ashman & Elkins (2009)	Foreman (2008)	Marsh (2008)	Berk (2008)
Token economy	X	X (ABA, CBA) O (HUM)		X			X (ABA)	X	X			
Forming and establishing classroom rules	X	X (AD, CBA, NA) O (HUM)		X	X	X	X (ABA, CT, AD, DD)	X (AD, GCT)	X (PBIS)	X	X	
Praise and/or encouragement, positive feedback	X	X (AD, ABA)	X	X	X (ABA)	X (GCT)	X (ABA, AD, GCT) O (TET)	X	X (PBIS)	X	X	X
Individual behaviour contracts	X	X (ABA, HUM)		X			X (ABA, DD)			X		
Altering classroom structure/environment	X	X (ABA, HUM)		X	X	X	X (TET)		X	X	X	
Student self-monitoring and evaluation systems	X (CBA)	X (CBA)		X		X (CBA)			X	X (CBA)		
Group contingency (whole class incentives)				X			X (AD)					
Time-out from positive reinforcement	X		O		X (ABA)		X (ABA)			X		
Teacher physical proximity/mobility	X			X	X	X	X (DD)	X (DD)			X	
Devising and teaching class routines	X			X	X	X					X	
Tactical/planned	X	X (ABA,		X (GCT)			X (ABA,			X		

ignoring	NA)				GCT, DD)							
Communicating clear behavioural/academic expectations	X	X (AD, EGAL)		X (DWTG)	X	X (AD, DD)	X	X	X	X		
Reprimands, correction statements, desists		X (ABA) O (NA, SFA)	O	X	X	X (DD)	X		X	X	X	
Response cost	X	X (ABA, CBA)			X (ABA)	X (ABA)				X		X
Diagnosing underlying function	X	X (ABA)		X		X (ABA)			X (ABA)	X (PBIS)		
Creating and using behaviour intervention plans	X			X			X	X (ABA)	X (PBIS)			
Pre-corrections, cues, prompts (antecedent)	X							X				X
Social skills instruction	X	X (CBA)	X	X		X	X	X	X	X		X
Total number practices	16	12	2	15	8	8	12	8	10	13	7	5

Note. ABA = Applied Behaviour Analysis, AD = Assertive Discipline, CBA = Cognitive Behaviour Approach, EGAL = Egalitarian, PBIS = Positive Behaviour Interventions and Support, DD = Decisive Discipline, CT = Control Theory, GCT = Goal Centred Theory, TET = Teacher Effectiveness Training, HUM = Humanism, NA = Neo-Alderian, SFA = Solution-focused approach, DWTG = Dealing With the Group. Numbers in bold indicate models that had nine or more supported practices. X indicates that the practice was included and advocated (sometimes with conditions) by the text author(s), O indicates that the practice was explicitly not advocated. Numbers in bold indicate the texts that had nine or more supported practices.

Table 4. Number of practices supported as effective in commonly prescribed texts.

Discussion

Although there are scores of CBM practices found in classroom management literature (see, for example, Evertson & Weinstein, 2006), in this study, 18 practices from a list of 55 examined were found to be supported as effective by research. The list of supported practices is modest in size, and included both proactive and reactive strategies. Proactive strategies supported by research include forming and establishing rules and using verbal acknowledgement for appropriate behaviour (Trussell, 2008). The smaller number of reactive strategies included time out from positive reinforcement and reprimands. The list also included practices that are designed for managing more challenging student behaviours, such as diagnosing underlying functions (e.g., functional behavioural assessment [FBA]); and creating behaviour intervention plans (BIPs), which are tertiary level practices within the positive behaviour intervention and support (PBIS) framework (Bambara, 2005). Classroom teachers, however, often require expert collaborative support to conduct FBAs and to develop and implement BIPs (O'Neill & Stephenson, 2009; Lane, Weisenbach, Little, Phillips, & Wehby, 2006). The list of supported practices would seem to offer beginning teachers a sufficient range of basic and more advanced practices to master in their early years in their inclusive classroom environments.

Recent examinations of the curriculum content of courses designed to impart CBM knowledge, skills, and understanding in Australian undergraduate primary teacher education programs, suggested that a multi-model approach was commonplace (O'Neill & Stephenson, 2011, 2012a). Six of the 19 most frequently included models reported in undergraduate primary teacher education programs contained nine or more of the supported practices: four of those models were in the top ten most frequently included models and were included in half of the dedicated courses surveyed (O'Neill & Stephenson, 2012a). Conversely, this finding suggests that approximately two thirds (13) of the most commonly included models imparted contain fewer than nine practices supported as effective. Since courses appear to present practices both with and without research support as equivalent, it seems course conveners and instructors may not provide additional information to trainee teachers about which practices are more likely to be effective. We believe it is important that CBM courses contain a preponderance of practices likely to be effective and that teaching about these practices should take priority over presenting a range of theoretical models that are without research support.

Two models that contained most (>80%), if not all, of the 18 practices supported were PBIS and ABA. PBIS is derived from ABA (Sugai et al., 2000). These models included behaviourist practices arising from B.F. Skinner's operant conditioning model (Alberto & Troutman, 2013; Sugai et al., 2000). Since Skinner's early work in the 1950s, numerous researchers have conducted empirical studies demonstrating the effectiveness of practices associated with operant conditioning, such as positive reinforcement in both laboratory and applied settings (see, for example, Higgins, Williams, & McLaughlin, 2001). Principles associated with behaviourism focus on observable, measureable, and clearly defined behaviours and practices (Alberto & Troutman, 2013) that are well suited to research designs that can establish relationships between the behaviour to be changed and the practice employed (e.g., reversal design - ABAB) (Zirpoli, 2008). This may explain why these models contained so many supported practices.

The model that was most frequently imparted to pre-service primary teachers in Australia (O'Neill & Stephenson, 2012a) was decisive discipline (Rogers, 2011). Rogers developed the model based on his experiences working as a teacher in Victorian schools (Edwards & Watts, 2004). Decisive discipline is viewed as an

interactionalist model, influenced by Rudolf Dreikurs and William Glasser, where teachers and students establish democratic rights and responsibilities to allow a safe and supportive learning environment for the group (Tauber, 2007). Rogers' model extends beyond those of Dreikurs and Glasser, with decisive discipline containing nine of the 18 supported practices. Unlike Dreikurs or Glasser's models, Rogers' model included practices that aim to modify student behaviour by altering environmental stimuli, such as teacher proximity and seating arrangements. He also supported the use of commands (brief reprimands) when serious misbehaviour arises.

Two models included in more than two thirds of CBM courses (O'Neill & Stephenson, 2012a), choice theory (Glasser, 2001) and goal-centred theory (Dreikurs et al., 1982), contained one and five practices respectively, of the 18 supported practices. These two psychotherapeutic models were first introduced in an era where psychology was being actively applied to understanding and improving parent-child relationships at home, or manager-worker relationships in industry (Tauber, 2007). Both models would later be extended to teacher-student relationships in classrooms (Tauber, 2007). That these models were developed by a psychologist and a psychiatrist (not teachers), and adapted from non-school settings, may in part explain why so few supported practices are found in these counseling-based models. These models focus on attending to the psychological needs of individual students and the group through practices such as class meetings and confronting students with their mistaken goals. Little attention is paid to proactive practices that organise the classroom, such as routines, or those that can quickly terminate unwanted behaviour, such as teacher proximity or response cost. Although philosophically appealing, Glasser's class meetings (and, indeed, the model as a whole) have shown no significant effect on student attitudes (Masters & Laverty, 1977). Similarly the Dreikurs' model and practices remain unvalidated (Blum, 1994). Charles and Senter (2005) suggested Dreikurs' model was problematic as it was "too unwieldy to be implemented easily" (p. 32), and lacked practices that can terminate aggressive, defiant, or disruptive behaviours quickly. Brophy (1988) also asserted that such psychotherapeutic models might be too complicated for novice teachers to put into practice.

One model that was included in approximately half of the CBM courses reported in O'Neill and Stephenson (2012a) was Kounin's variables, which contained three of the 18 supported practices. Kounin's research was not driven by the need to validate a model or theory about CBM; initially he sought to explain students' responses to teachers' desists (teacher actions designed to stop behavior). Although his initial focus was on teacher desists (nature and quality), when this line of inquiry raised more questions than were answered, Kounin's attention shifted to identifying teacher behaviours that actively engaged students. Each of Kounin's 10 variables included a number of teacher actions or practices, the first four pertaining to classroom management (e.g., withitness), the remainder to student engagement (e.g., group alerting). Kounin's correlational research limited specific address of classroom and behaviour management strategies, and thus while of value for instructional management, his variables do not cover the diverse range of supported practices identified in the current study.

Although not among the top 20 models included by course coordinators (O'Neill & Stephenson 2012a) study, the balance model (Richmond, 2008) was examined for supported practices as it represented a new locally developed model nominated by coordinators of dedicated CBM courses. Richmond developed the model based on her experiences whilst working as a guidance officer in Queensland schools. The model included 11 of the 18 practices in a practical *how to* style. In this model, teachers are urged to tip the balance of language and actions in their

classroom, regardless of which approach or theory they adopt, towards instruction rather than correction. Establishing expectations, acknowledging appropriate behavior, and correcting inappropriate behaviours are three key components of her model (Lyons, Ford, & Arthur-Kelly, 2011). Up until recently, dissemination of this model to pre-service teachers may have been limited as it was not included in Australian texts on classroom management models such as Edwards and Watts (2004), although the latest edition of *Classroom Management: Creating Positive Learning Environments* (Lyons, et al., 2011) does provide a basic overview of the model.

The 12 classroom management texts examined in this study contained a higher percentage of supported practices than did the models. The majority of texts prescribed for courses where CBM was the focus (dedicated courses), contained nine or more supported practices. The text with the highest number of supported practices, Zirpoli (2007), was focused mainly on ABA. Konza et al. (2003) reported drawing from their experiences working in classrooms and research when writing their book, and tended not to link particular practices to theories or research. This decision may have been due either to teachers reporting distrust of research (Boardman, Argüelles, Vaughn, Hughes, & Klingner, 2005) or to the belief that novice teachers find theoretical approaches off-putting or impractical (Atici, 2007).

Two of the prescribed texts (Edwards & Watts, 2004; Porter, 2007) that were used in dedicated courses and that included nine or more of the supported practices presented multiple models. On closer examination of the sources of supported practices, it can be seen that without practices attributed to ABA and cognitive behaviour approaches (CBA), the text by Porter (2007) would not have been rated as including nine or more supported practices, and in the case of Edwards and Watts (2004), if practices attributed to ABA were removed, the text would have just met the score of nine practices. In the case of prescribed texts used only in courses where CBM was not the focus (embedded courses), the two texts that had nine or more supported practices were designed to educate teachers about inclusive education: Ashman and Elkins (2009), and Foreman (2008). Ashman and Elkins (2009) included four practices of the 10 (40%) assessed in this study that were clearly associated with PBIS or ABA. In the case of Foreman (2008), the chapter most relevant to CBM, written by Professor Bob Conway, advocated the use of functional behavioural assessment to guide the construction of individual behaviour intervention plans and tier-three interventions within the PBIS framework. A number of the other supported practices included in this text were advocated with no supporting literature cited, such as altering classroom structure/environment, or were linked to one particular article, such as Babkie (2006), that advocated behaviourist practices such as behavioural contracts. It would appear that the inclusion of practices associated with ABA, CBA, or PBIS were most likely to result in the prescribed texts examined in this study containing nine or more of supported practices.

It seems that both course content and prescribed texts may not provide clear guidance to trainee teachers about which practices and models have substantial research support for their effectiveness. Both models presented in courses and prescribed texts contain many practices, and some models lack evidence for their effectiveness, with only one model (PBIS) containing all 18 practices identified as having research support. No text contained all 18 practices that we classified as having research support for their effectiveness. Unless those teaching such courses offer background information on research evidence and prioritise the teaching of practices shown to be effective, it seems that trainee teachers are being left to make their own decisions about CBM practices. In addition, if the full range of effective

practices are neither included in course content nor in prescribed texts, trainee teachers are being poorly prepared for the challenges of classroom teaching.

Limitations

An important limitation of this study is that some of the practices examined that were not included in or supported by the seven sources used to rate effectiveness, *may be* effective. The lack of rigorous experimental studies on some practices or their failure to meet other criteria associated with evidence-based practice may, at this time, have led to omissions. A further limitation was the great variability in the level of detail included in indexes of texts used to analyse the CBM models reviewed in this study. Some practices may have been mentioned in some texts, but were not located by scanning indices, tables of contents, and chapter headings and subheadings. In addition, while we have identified inclusion of both supported and unsupported practices and models within CBM courses, we do not know how course convenors have represented or prioritised this content. Convenors may provide additional emphasis on, and time for, consideration of supported practices, in comparison to unsupported practices.

Conclusion and Recommendations

Given the scores of CBM practices described in the extant literature, this study is timely in providing a list of 18 effective CBM practices that appear to have a weight of research support and should be considered for inclusion in subjects covering CBM within initial teacher education courses. It would appear that many of the practices that met the criteria in this study as effective originated with ABA. ABA does have a long and rigorous research history (Alberto & Troutman, 2013), and with PBIS gathering international support as an effective CBM framework (Sailor, Dunlap, Sugai, & Horner, 2009), more research may have been focused upon behaviourist practices associated with PBIS than upon other psychotherapeutic models and their associated practices. Many psychotherapeutic models continue to be included in CBM texts despite the existence of limited or no research evidence of effectiveness (Maag, 2012). If teacher educators decide to present models with practices that do not yet have support from empirical research, they should make it clear to teachers that this is the case and that these practices should be used with caution.

For beginning teachers, the emphasis should be on effective proactive strategies to be supported by a smaller number of reactive strategies, or back-up practices, that do have support. Proponents of psychoeducational models are encouraged to conduct rigorous research into such models and their associated practices, so as to broaden the evidence-base in CBM. As Kounin (1970) asserted, "The necessity of studying actual classrooms is especially important for problems of discipline when it is defined as a problem of behavior management. We need to know what teachers *do* that makes a difference to how pupils behave in classrooms" (p. 59). Good research to assess the effectiveness of CBM programs, models, or practices is not impossible, just time consuming and costly (Oliver et al., 2011). Although costly, such research is likely cheaper than the costs of poor CBM, which has been associated with teacher burnout and attrition (Brouwers & Tomic, 2000), and lost instruction time lowering academic achievement (Marzano et al., 2003).

The list of supported practices reported in this study could be a useful starting point for teacher educators of pre-service or in-service teachers when designing their

CBM curriculum content. Teacher educators may be able to make decisions that are more informed by empirical research about which CBM models to impart or which texts to prescribe. A focus on fewer CBM models that have a stronger evidence-base, (see O'Neill & Stephenson, 2012a; Brophy, 1988; Stewart-Wells, 2000) such as ABA, PBIS, positive classroom discipline (Jones, 1987), or decisive discipline (Rogers, 1995), may raise the confidence of beginning teachers in using CBM models and increase their preparedness to manage a range of common problematic student behaviours (O'Neill & Stephenson, 2012b). The focus for teacher preparation in CBM should be based on what we *do know* is effective.

Teacher educators are encouraged to assess new CBM models and texts they are considering adopting against the list of supported practices reported in this study. As teacher educators it *is* our responsibility to be more informed and selective about what we choose to teach the next generation and current generation of teachers. We concur with the NCTQ (2013) position that teachers *do* need training in evidence-based skills, strategies, and practices. Providing beginning teachers instead with a “professional mindset that theoretically allows them to approach each new class thoughtfully and without any preconceived notions” (NCTQ, 2013, p. 6) will be doing our newest teachers a great disservice.

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Acknowledgement

A version of this research was presented at the Australian Association for Research in Education Conference in Sydney in December 2012.