

# Agreeing to Agree: A Response to Dempsey's Commentary on the Reported Prevalence by Australian Special Educators of Evidence-Based Instructional Practices

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Dempsey (this issue) has provided a commentary on our study (Carter, Stephenson, & Strnadová, 2011) examining the reported rates of use of instructional practices by Australian special educators. Examining this commentary, it is evident that on many issues we are on the same page and agree on many of the fundamental conclusions to be drawn from the study. Nevertheless, Dempsey did express concern regarding several aspects of the reporting of the study, which were suggested to have the 'potential to mislead' readers. In essence, these criticisms revolve around four substantive points and these will each be addressed.

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## All Effective Instructional Approaches Should be Used With the Same Degree of Frequency

In relation to the suggestion that all effective instructional approaches should be used with the same degree of frequency, Dempsey stated that 'while I expect that Carter et al. do not believe this, one could forgive some readers for coming to this conclusion after reading their article' (p. 221). This point is illustrated with the example of mnemonic instruction, which, it is noted, has much narrower application than strategies such as applied behaviour analysis. In response, we would note that Dempsey is correct in asserting that we do not hold to this belief. We would, however, disagree that readers are likely to come to this erroneous conclusion after reading the article. In fact, a paragraph of the Discussion was dedicated to making exactly the point that instructional approaches would be expected to be employed at different frequencies, using mnemonics as an example of a technique that has relatively restricted application. Dempsey also noted that 'this is a plausible explanation for the comparatively lower use of mnemonics in Carter et al.'s research findings and is no cause for concern' (p. 221). In relation to practices with substantial empirical support, we would agree that the lower level of use of mnemonic training is not

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of concern and is to be expected, given its more narrow potential application. Mnemonic instruction, however, was also used at comparable or lower levels than some strategies (perceptual-motor and modality training) that are demonstrably ineffective based on extant research evidence. This, on the other hand, clearly is of concern.

### **All Instructional Approaches are Equally Effective Across Groups of Students**

The exact nature of this criticism was a little opaque but we assume that the intent was to rebuke us for implicitly inferring that interventions are equally effective across instructional groups. Dempsey argued that diagnostic groups have different distinctive characteristics but also that ‘it does not necessarily follow that effective instructional techniques will be markedly different across these groups’ (p. 222). There is no dispute that diagnostic groups often have distinctive characteristics. In the case of autism, for example, it is axiomatic that individuals will have distinctive behavioural characteristics because the disorder is explicitly defined by its behavioural symptomatology. Similarly, we agree with Dempsey that it does not follow that instructional techniques will necessarily be substantively different across different diagnostic groups. In fact, the history of special education has been littered with attempts to develop such diagnostic-prescriptive interventions, which have been consistently unsuccessful (Kavale & Forness, 1999; Kavale & Mostert, 2004; Vaughn & Linan-Thompson, 2003).

Dempsey concluded noting that ‘the sample size and the nature of some demographic questions used in both the Carter et al. (2011) and the Burns and Ysseldyke (2009) studies permitted no conclusions to be drawn in this area’ (p. 222). Again, we are forced to agree — the studies were not designed to address questions regarding the effectiveness of instructional strategies across diagnostic groups and could not reasonably be expected to do so.

### **The Desirable Instructional Approaches Included in Carter et al.’s Article are the Only Desirable Approaches**

Dempsey argued that ‘we can draw no conclusions about the extent of the use of the full set of effective instructional strategies by special education teachers because a very selective set of practices were examined in both studies’ (p. 223). This is quite correct, but we did not imply at any point in the Carter et al. (2011) article that a full range of practices was being examined, although we would comment in passing that the practices selected by Burns and Ysseldyke (2009) do represent several approaches that have been prominent over the past several decades in special education literature. Clearly, there are many other strategies employed in special education, with varying degrees of supporting evidence and it would be valuable for other researchers to examine the use of these practices. In addition, broad instructional approaches, such as applied behaviour analysis, encompass many specific instructional strategies and applications. More detailed examination of the use of these specific strategies by teachers would be informative.

### **Selecting Instructional Strategies**

An issue that recurred at several points through Dempsey’s commentary related to how special education teachers should select instructional strategies. If our interpretation is correct, Dempsey’s central argument was that in making instructional decisions, teachers should consider the specific needs of the learner, their own professional judgment,

research evidence, as well as data collected on student progress. It would be very difficult to argue against any of these points and the final consideration, regular formative collection of data on response to instruction, is worthy of particular emphasis. Nevertheless, when making decisions regarding instruction, teachers can be presented with options that have diametrically opposite levels of empirical support (e.g., perceptual-motor training and ABA-based strategies). While individuals can certainly respond differently to instruction, we would argue that teachers should, in the first instance, select strategies with high probabilities of success based on available research evidence.

We concur with Dempsey's conviction that research on instructional practices in education is far from flawless and that randomised controlled trials (RCTs) do not represent the only way of validating educational practices. For example, the overreliance of the What Works Clearinghouse on often trivial numbers of RCTs, while ignoring large numbers of other well-conducted studies, has resulted in anomalous recommendations and well illustrates the problem (Carter & Wheldall, 2008). On the positive side, however, the What Works Clearinghouse has recently released evidence standards for single-case research studies (Kratochwill et al., 2010), clearly a step in the right direction. Regardless of the flaws, we do have a reasonably well-developed research base in special education, which provides us with the information to make educated guesses about the types of interventions that are most likely to be effective (Heward, 2003). We also know that some strategies, such as perceptual-motor training and modality instruction, are unlikely to be effective.

Dempsey argued that some instructional strategies that lack supporting research evidence may have positive effects on student learning and, while probably not our first option, should not be discarded automatically. Again, there is little to disagree with in this assertion, providing educators understand that when selecting interventions that do not have a reasonably solid empirical foundation, they bear additional professional responsibility to systematically monitor the outcomes of intervention and make adjustments if student learning is not evident. It should be stressed, however, that such judgments should be based on hard data on student performance rather than the perception of the practitioner or parent. Human perception is fundamentally flawed when making judgments under conditions of uncertainty (Yates, 2008) and there is ample evidence of popular support for interventions that in controlled evaluation are patently ineffective, facilitated communication being a case in point (see Mostert, 2010).

It is also important to carefully consider how interventions are employed by teachers. Dempsey uses the example of sensory-motor techniques such as trampolining or swinging, which cannot be justified on the basis of research evidence but may be 'enjoyable for the student and lead to improvements in motivation and attention' (p. 224). If such activities are used to attempt to alter underlying perceptual processes in order to improve learning, we would strongly argue that this is an inappropriate use of instructional time and almost certainly a waste of resources. The use of an activity, such as trampolining or swinging, as a reinforcer in the context of an evidence-based communication program, for example, is a different matter and in absolutely no way equates to the delivery of a perceptual-motor program.

## Conclusion

For the sake of brevity we have focused our response on the issues identified by Dempsey as points of disagreement, perhaps obscuring the fact that we concur on many of the fundamental issues raised in the study. Moreover, while we would argue that there

are some misinterpretations in Dempsey's commentary, on detailed examination many of the apparent disagreements simply reflect differences in emphasis. There appears to be agreement that special educators should use empirical evidence to inform selection of instructional practices. In addition, we appear to concur that practitioners should collect data on student performance to assess the efficacy of teaching and guide decisions regarding instructional changes.

The fundamental message from the Carter et al. (2011) study was that special education teachers report using some empirically supported practices in combination with practices that appear to be demonstrably ineffective based on current evidence. While there are some positive signs, there clearly remains more to be done before special education becomes an evidence-based profession.

## References

- Burns, M.K., & Ysseldyke, J.E. (2009). Reported prevalence of evidence-based instructional practices in special education. *The Journal of Special Education, 43*, 3–11. doi:10.1177/0022466908315563
- Carter, M., Stephenson, J., & Strnadová, I. (2011). Reported prevalence by Australian special educators of evidence-based instructional practices. *Australasian Journal of Special Education, 35*, 47–60. doi:10.1375/ajse.35.1.47
- Carter, M., & Wheldall, K. (2008). Why can't a teacher be more like a scientist? Science, pseudoscience and the art of teaching. *Australasian Journal of Special Education, 32*, 5–21. doi:10.1080/10300110701845920
- Dempsey, I. (2011). Commentary on Carter, Stephenson and Strnadová's reported prevalence by Australian special educators of evidence-based instructional practices. *Australasian Journal of Special Education, 35*, 220–225.
- Heward, W.L. (2003). Ten faulty notions about teaching and learning that hinder the effectiveness of special education. *The Journal of Special Education, 36*, 186–205. doi:10.1177/002246690303600401
- Kavale, K.A., & Forness, S.R. (1999). *Efficacy of special education and related services*. Washington, DC: American Association on Mental Retardation.
- Kavale, K.A., & Mostert, M.P. (2004). *The positive side of special education: Minimizing its fads, fancies, and follies*. Lanham, MD: ScarecrowEducation.
- Kratochwill, T.R., Hitchcock, J., Horner, R.H., Levin, J.R., Odom, S.L., Rindskopf, D.M. & Shadish, W.R. (2010). *Single-case designs technical documentation*. Retrieved October 10, 2010, from [http://ies.ed.gov/ncee/wwc/pdf/wwc\\_scd.pdf](http://ies.ed.gov/ncee/wwc/pdf/wwc_scd.pdf)
- Mostert, M.P. (2010). Facilitated communication and its legitimacy—twenty-first century developments. *Exceptionality, 18*, 31–41. doi:10.1080/09362830903462524
- Vaughn, S., & Linan-Thompson, S. (2003). What is special about special education for students with learning disabilities? *The Journal of Special Education, 37*, 140–147. doi:10.1177/00224669030370030301
- Yates, G.C.R. (2008). Roadblocks to scientific thinking in educational decision making. *Australasian Journal of Special Education, 32*, 125–137. doi:10.1080/10300110701842646