

ORIGINAL ARTICLE

# Perceptions of Importance and Reported Frequency of Instruction of Self-Determination by Teaching Assistants in New South Wales Schools<sup>†</sup>

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## Abstract

Self-determination skills, including competencies such as decision-making, are regarded by parents and teachers as important for students with special needs. Although not necessarily regarded as appropriate, teaching assistants often take substantial responsibility for delivering educational programs to students and little is known about their perspectives on self-determination. Perspectives of teaching assistants may impact on their support of programs to enhance self-determination that are developed by teachers. Teaching assistants in New South Wales mainstream schools ( $N = 320$ ) were surveyed regarding their views on the importance and frequency of instruction of seven competencies related to self-determination of students with special needs. Consistent with previous research, assistants rated all the competencies highly in terms of importance, but frequency of implementation was more variable. Moderate correlations were found between ratings of importance and frequency of implementation, suggesting that greater instructional time was devoted to competencies viewed as more important. Limited differences were found between assistants working at primary and secondary levels. Although features of the interactions of teaching assistants that can inhibit self-determination have been often identified in previous research, it is argued that, paradoxically, assistants may be well positioned to facilitate the development of self-determination with appropriate training and supervision. Directions for future research are identified.

**Keywords:** self-determination; teaching assistants; paraprofessional

The concept of self-determination refers to a set of skills, knowledge, and beliefs that enable individuals to engage in behaviour that is goal directed, self-directed, and autonomous (Field et al., 1998). Self-determination typically includes a range of specific competencies such as choice-making, decision-making, goal setting and attainment, problem-solving, self-advocacy and leadership, self-awareness and self-knowledge, and self-management and self-regulation (E. W. Carter et al., 2011).

Self-determination is regarded as critical to enabling students with special needs to achieve education-related and broader life outcomes (Burke et al., 2020; E. W. Carter et al., 2008; Giangreco, 2021). There is a substantial body of research suggesting that a range of stakeholders, including parents (E. W. Carter et al., 2013), teachers (Agran et al., 1999; E. W. Carter et al., 2008; Wehmeyer et al., 2000), and administrators (E. W. Carter et al., 2015), view competencies in self-determination as an important outcome of school education. In addition, there is a modest but growing body of research indicating that the knowledge and skills essential to self-determination can be taught in mainstream school settings (Burke et al., 2020). Nevertheless, self-determination is not always

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adequately addressed in school programs. For example, in a study in NSW schools examining educational practices relating to transitions for students with special needs, Strnadová and Cumming (2014) identified a failure to adequately support development of self-determination.

Although not necessarily regarded as appropriate, there is considerable evidence across a range of countries that teaching assistants often play a significant role in delivering instruction to students with special needs in mainstream classrooms (Butt & Lowe, 2012; M. Carter et al., 2019; Giangreco, 2013; Webster & Blatchford, 2015) as well as adapting and planning instruction and adjustments in some instances (M. Carter et al., 2019; Giangreco & Broer, 2005; Howard & Ford, 2007; Ware et al., 2011; Webster & Blatchford, 2015). In addition to the often inappropriate divestiture of instructional responsibilities, teaching assistants may engage in roles or practices that are counterproductive to the development of self-determination. For example, they may focus on supplying answers (Griffin & Blatchford, 2021; Rubie-Davies et al., 2010; Vogt et al., 2021) or on facilitating task completion (Butt & Lowe, 2012; M. Carter et al., 2019; Giangreco, 2010b; Griffin & Blatchford, 2021; Vogt et al., 2021) rather than systematically teaching students to complete tasks independently. In particular, overuse of teaching assistants may lead students to become overly dependent on adult help (Broer et al., 2005; Butt, 2016; Giangreco, 2013; Giangreco & Broer, 2007; Griffin & Blatchford, 2021; Sharma & Salend, 2016). Given that previous researchers have found that opportunity to make decisions and engage in problem-solving is key to the development of self-determination, the actions of teaching assistants could directly impact the student's opportunities to develop self-determination skills needed for future success (Wehmeyer et al., 2017).

A number of surveys have provided examination of the views of school professionals or parents regarding the importance of self-determination and the amount of instruction, but only one study appears to have been conducted with teaching assistants. Drawing from a larger study in the United States (US), E. W. Carter et al. (2011) reported results for a sample of 347 teaching assistants working with students with low-incidence (severe) disabilities, while Lane et al. (2012) reported on 233 assistants working with students with high-incidence disabilities. A number of consistent findings were identified across both subsamples, including high levels of importance attached to self-determination competencies but lower levels of reported instruction in these competencies. In addition, limited differences were found in reported ratings of importance and degree of implementation of self-determination competencies across elementary and secondary levels of schooling.

Thus, although teaching assistants often play an important role in instruction in mainstream classrooms, there is evidence that some behaviours may be counterproductive to the development of self-determination. Consequently, the views of teaching assistants on the importance of self-determination competencies and the extent to which they report addressing such competencies are of significance. To date, the view of teaching assistants with regard to self-determination and the extent to which they support these competencies appear to have been investigated only in the US (E. W. Carter et al., 2011; Lane et al., 2012). Given the different policies, curriculum, and viewpoints that provide the context for Australian schools, further research is needed to determine if the views and experience of teaching assistants differ from those reflected in US studies. Data for the current study were collected contemporaneously with research examining the roles and training needs of teaching assistants in NSW public schools, which is reported elsewhere (M. Carter et al., 2019). The research questions for the study were as follows:

1. What importance do teaching assistants attach to self-determination competencies?
2. Are there differences in the ratings of importance of self-determination competencies by teaching assistants?
3. How frequently do teaching assistants report teaching self-determination competencies?
4. Are there differences in the reported degree of implementation of self-determination competencies by teaching assistants?

5. Are there differences between ratings of importance and reported frequency of implementation of self-determination competencies across teaching assistants in primary and secondary settings?
6. What are the relationships between ratings of importance and reported degree of implementation of self-determination competencies by teaching assistants?

## Method

### Ethics

Ethics approval for this research was obtained from Griffith University (Ref: EDN/55/14/HREC) and the NSW Department of Education (Ref: 2014224). All respondents provided informed consent for participation.

### Survey Construction

Demographic information was collected in the first part of the survey. This included information on years of experience as a teaching assistant, level of school in which respondents worked (preschool, primary, secondary), whether they currently supported a single child or multiple children, and whether they most commonly worked in a single classroom or multiple classrooms. In addition, respondents were asked to indicate all the categories of disability that they currently worked with from a provided list. The second part of the survey addressed roles and training needs of teaching assistants and is reported elsewhere (M. Carter et al., 2019). The third part of the survey was adapted from that described by E. W. Carter et al. (2011). Brief descriptions of seven competencies related to self-determination were presented to respondents:

1. Choice-making: teaching students to identify interests, express preferences, and make choices; structuring instructional activities to provide students the opportunity to select preferences
2. Decision-making: teaching students to make effective decisions and providing them with opportunities to participate in making decisions about their education and postschool life
3. Problem-solving: teaching students to systematically solve problems and providing them with opportunities to participate in problem-solving activities
4. Goal setting and attainment: teaching students to set and track goals, participate in goal-setting activities, and develop plans to achieve goals
5. Self-advocacy and leadership skills: teaching students to know and stand up for their rights, to communicate effectively and assertively, and to be an effective leader or team member
6. Self-management and self-regulation skills: teaching students to monitor and evaluate their own behaviour, select and provide their own reinforcement, set their own schedule, and self-direct learning through strategies like self-instruction
7. Self-awareness and self-knowledge: teaching students to identify their own strengths and limitations, identify their own preferences, interests, and abilities, and apply that knowledge to their advantage.

Respondents were asked to indicate both the importance of each skill and how often they taught each skill. To maintain consistency with the other part of the survey (addressing the teaching assistant roles), the response scale was varied from that employed by E. W. Carter et al. (2011). With regard to importance, participants were asked to respond on a 5-point Likert-type scale from *very unimportant* to *very important*. With regard to frequency of instruction, participants were asked to respond on a 7-point scale (*never, yearly, twice yearly, monthly, weekly, daily, more than once a day*). Participants were given an example of a response before completing the survey. The scale has been socially validated across a number of studies (E. W. Carter et al., 2013) and was found to be internally consistent in the present study, with a Cronbach's alpha of .86 for importance and .96 for frequency of instruction.

### Survey Distribution

NSW public schools (i.e., government-administered schools) were identified from a database. Schools for specific purposes (i.e., special schools that do not include typically developing peers) were excluded. Principals were sent an invitation by post and, if they agreed to participate, were asked to indicate the number of school learning support officers (teaching assistants) employed in the school and working with students with disabilities. The requested number of surveys was sent to each school with reply-paid envelopes. A small number of mistargeted special schools were identified at this stage and excluded from analysis, but two schools were inadvertently sent surveys.

### Return Rate

A total of 149 of the 2,130 schools contacted agreed to participate. From the 854 surveys distributed, 361 responses were received (return rate 42.3%), and of these, 320 provided at least one answer to the self-determination section.

### Data Analysis

Some respondents did not complete the full survey or provided uncodable responses to some questions (e.g., selecting multiple response options). Their responses were retained for completed and codable components, providing they included some responses to the self-determination questions. Responses for the importance question were numerically coded from  $-2$  (*very unimportant*) to  $+2$  (*very important*), with the neutral option assigned a value of zero. Similarly, frequency of teaching was assigned values between 0 (*never*) and 6 (*more than once a day*).

Inferential analyses were restricted to the a priori research questions. Given the underlying ordinal nature of the data and highly skewed distributions, nonparametric inferential tests were employed. Friedman two-way analyses of variance were conducted using the Real Statistics Resource Package (Zaiontz, 2021) to examine whether there were any differences in rankings of importance or frequency of teaching of self-determination competencies. Where a significant difference was found, Friedman–Nemenyi post hoc test comparisons were completed to establish exactly which competencies differed. This post hoc test was preferred, as it provides inbuilt correction for multiple comparisons (Zaiontz, 2020).

Differences between teaching assistants in primary and secondary settings for ratings of importance and teaching frequencies were examined by comparing assistants working only in primary settings with those working only in secondary settings, using two-tailed Mann–Whitney  $U$  tests on the Brightstat (Stricker, 2008) platform. Given only two mutually exclusive groups were being compared, the Mann–Whitney  $U$  test was selected as it is one of the most powerful nonparametric tests and the most useful alternative to the  $t$ -test with ordinal data (Siegel & Castellan, 1988). Bonferroni-corrected alpha values of .007 (i.e., alpha level of .05 divided by 7 comparisons) were used for each comparison. To examine the relationship between importance and frequency of teaching, Spearman rank correlations were conducted for each self-determination area using StatPlus (AnalystSoft Inc., 2021), and a Bonferroni-corrected alpha of .007 was used.

## Results

### Demographic Information

Demographic data are summarised in Table 1. Respondents indicated that they had worked for a mean of 9.20 years ( $SD = 6.36$ ) as teaching assistants. The majority of respondents worked in primary schools and typically worked supporting more than one child with special needs, taught in multiple classrooms, and most commonly worked with a student for more than 2 years. Respondents worked with students with a range of disabilities, with the most common being autism spectrum disorder, followed by

Table 1. Demographics of Sample

	<i>M</i>	<i>SD</i>	Total
Years as teaching assistant	9.20	6.36	
At what school level do you primarily work?			
Preschool			5
Primary			174
Secondary			124
Over the past year, on average, how many hours per week were you employed to support children with special needs in regular classrooms?	21.96	9.87	
Which of the following disability categories are you currently working with? (Tick all that apply)			
Mild intellectual disabilities			224
Moderate to severe intellectual disabilities			134
Profound and multiple disabilities			63
Autism spectrum disorder (e.g., autism, Asperger's disorder)			365
Behaviour problems			267
Visual impairment			86
Hearing impairment			70
Learning disability			258
Physical disability			126
Speech/language impairment			168
Are you currently employed:			
Supporting a <b>single child</b> with special needs			30
Supporting <b>more than one</b> child with special needs			282
Do you <b>most commonly</b> work with a student with special needs (tick one only):			
For 1 year or less			51
Between 1 and 2 years			72
For more than 2 years			179
Do you <b>most commonly</b> work (tick one only):			
In a single classroom			106
Across multiple classrooms			202
What is the highest level of school or degree you completed?			
High school			100
TAFE course for teaching assistants			130
Diploma			59
Bachelor's degree			19
Master's degree or above			3
Are you employed?			
Permanent			159
Casual			142

**Table 2.** Ratings of Importance of Self-Determination Capabilities

Rating	Self-determination area						
	Choice-making	Decision-making	Problem-solving	Goal setting and attainment	Self-advocacy and leadership	Self-management and self-regulation	Self-awareness and self-knowledge
Very important (2)	159	196	215	142	152	189	173
Important (1)	146	113	97	150	143	112	136
Neutral (0)	8	7	5	19	16	16	9
Unimportant (-1)	0	1	0	0	1	1	0
Very unimportant (-2)	3	1	1	1	2	1	1
No response or uncodable	45	43	43	49	47	42	42
<i>M</i>	1.45	1.58	1.65	1.38	1.41	1.53	1.50
<i>SD</i>	0.64	0.59	0.55	0.63	0.66	0.64	0.59

behaviour problems, learning disability, and mild intellectual disability. Approximately 89% of the full sample reported that they spent time in providing individual support in mainstream classes on at least a daily basis (M. Carter et al., 2019).

### Importance of Self-Determination Capabilities

Data on ratings of importance of each capability are presented in Table 2. The vast majority of ratings for all skill domains were either *important* or *very important*, with the highest number of *very important* ratings attached to problem-solving, decision-making, and self-management and self-regulation.

Results of the Friedman two-way analysis of variance indicated that there were significant differences in the rankings for importance,  $\chi^2(6, N = 275) = 189.9, p < .0001$ , so Friedman–Nemenyi post hoc test comparisons were completed. The results of these paired comparisons are presented in Table 3. Significant differences in rankings were found for four comparisons. Both decision-making and problem-solving were ranked significantly higher than goal setting and attainment, problem-solving was ranked higher than self-advocacy and leadership, and problem-solving was ranked higher than choice-making.

### Frequency of Instruction

Data on ratings of reported frequency of implementation of each skill area are presented in Table 4. The modal frequency of implementation in each skill area was daily, but there was considerable variation. The most frequently taught areas of self-determination were choice-making and problem-solving.

There were significant differences in the rankings for frequency,  $\chi^2(6, N = 303) = 75.6, p < .0001$ , so Friedman–Nemenyi post hoc test comparisons were completed. The results of these paired comparisons are presented in Table 5. Choice-making was ranked as addressed more frequently than decision-making, goal setting and attainment, and self-advocacy and leadership. Problem-solving was rated more frequently than decision-making, goal setting and attainment, and self-advocacy and leadership. Decision-making was reported as being implemented more frequently than goal setting and attainment. Both self-management and self-regulation and self-awareness and self-knowledge were rated as more frequently implemented than both goal setting and attainment and self-advocacy and leadership.

**Table 3.** Friedman–Nemenyi Post Hoc Tests for Ratings of Importance of Self-Determination Capabilities

	Comparison	R sum	<i>q</i>	<i>p</i>
Choice-making	< - > Decision-making	117	3.11	0.299
Choice-making	< - > Problem-solving	184.5	4.91	0.011*
Choice-making	< - > Goal setting and attainment	54	1.44	0.950
Choice-making	< - > Self-advocacy and leadership	26	0.69	0.999
Choice-making	< - > Self-management and self-regulation	90	2.39	0.622
Choice-making	< - > Self-awareness and self-knowledge	45.5	1.21	0.979
Decision-making	< - > Problem-solving	67.5	1.80	0.865
Decision-making	< - > Goal setting and attainment	171	4.55	0.024*
Decision-making	< - > Self-advocacy and leadership	143	3.80	0.105
Decision-making	< - > Self-management and self-regulation	27	0.72	0.999
Decision-making	< - > Self-awareness and self-knowledge	71.5	1.90	0.830
Problem-solving	< - > Goal setting and attainment	238.5	6.34	<0.001*
Problem-solving	< - > Self-advocacy and leadership	210.5	5.60	0.002*
Problem-solving	< - > Self-management and self-regulation	94.5	2.51	0.565
Problem-solving	< - > Self-awareness and self-knowledge	139	3.70	0.126
Goal setting and attainment	< - > Self-advocacy and leadership	28	0.74	0.998
Goal setting and attainment	< - > Self-management and self-regulation	144	3.83	0.100
Goal setting and attainment	< - > Self-awareness and self-knowledge	99.5	2.65	0.501
Self-advocacy and leadership	< - > Self-management and self-regulation	116	3.08	0.309
Self-advocacy and leadership	< - > Self-awareness and self-knowledge	71.5	1.90	0.830
Self-management & self-regulation	< - > Self-awareness and self-knowledge	44.5	1.18	0.981

\**p* < .05.

### Primary and Secondary Settings

Mann–Whitney *U* test results for comparisons of teaching assistants for ratings of importance of self-determination competencies are presented in Table 6. The only significant difference at the Bonferroni-corrected alpha was for decision-making, where secondary teaching assistants ranked it higher. Mann–Whitney *U* results for comparisons for ratings of frequency of teaching are presented in Table 7. There were no statistically significant differences.

### Relationship Between Importance and Frequency of Instruction

Spearman rank correlations between importance and frequency of implementation scores for each area of self-determination are presented in Table 8. The highest correlation (0.50) was found for self-management and regulation, with correlations for the remaining areas ranging between 0.36 and 0.42. All correlations were statistically significant using the Bonferroni-corrected alpha of .007.

### Discussion

In the current paper, teaching assistant views and reported level of implementation of self-determination competencies were evaluated. A high level of importance was attached to all self-determination



**Table 4.** Ratings of Frequency of Instruction of Self-Determination Competencies

Rating	Self-determination capability						
	Choice-making	Decision-making	Problem-solving	Goal setting and attainment	Self-advocacy and leadership	Self-management and self-regulation	Self-awareness and self-knowledge
More than once a day (6)	74	58	73	33	39	80	62
Daily (5)	153	126	151	102	108	114	126
Weekly (4)	41	50	44	63	65	39	51
Monthly (3)	12	23	18	36	32	29	30
Twice yearly (2)	4	10	3	11	10	6	7
Yearly (1)	1	5	3	5	3	3	3
Never (0)	19	34	17	49	41	31	25
No response or uncodable	57	55	52	62	63	59	57
<i>M</i>	4.66	4.16	4.63	3.66	3.87	4.33	4.32
<i>SD</i>	1.47	1.81	1.45	1.93	1.85	1.80	1.65

**Table 5.** Friedman–Nemenyi Post Hoc Tests for Ratings of Frequency of Self-Determination Capabilities

	Comparison	R sum	<i>q</i>	<i>p</i>
Choice-making	< - > Decision-making	192	5.36	0.003*
Choice-making	< - > Problem-solving	31	0.87	0.996
Choice-making	< - > Goal setting and attainment	383	10.69	<0.001*
Choice-making	< - > Self-advocacy and leadership	305.5	8.53	<0.001*
Choice-making	< - > Self-management and self-regulation	72.5	2.02	0.785
Choice-making	< - > Self-awareness and self-knowledge	114	3.18	0.273
Decision-making	< - > Problem-solving	223	6.22	<0.001*
Decision-making	< - > Goal setting and attainment	191	5.33	0.004*
Decision-making	< - > Self-advocacy and leadership	113.5	3.17	0.278
Decision-making	< - > Self-management and self-regulation	119.5	3.34	0.221
Decision-making	< - > Self-awareness and self-knowledge	78	2.18	0.721
Problem-solving	< - > Goal setting and attainment	414	11.56	<0.001*
Problem-solving	< - > Self-advocacy and leadership	336.5	9.39	<0.001*
Problem-solving	< - > Self-management and self-regulation	103.5	2.89	0.390
Problem-solving	< - > Self-awareness and self-knowledge	145	4.05	0.067
Goal setting and attainment	< - > Self-advocacy and leadership	77.5	2.16	0.727
Goal setting and attainment	< - > Self-management and self-regulation	310.5	8.67	<0.001*
Goal setting and attainment	< - > Self-awareness and self-knowledge	269	7.51	<0.001*
Self-advocacy and leadership	< - > Self-management and self-regulation	233	6.50	<0.001*
Self-advocacy and leadership	< - > Self-awareness and self-knowledge	191.5	5.35	0.004*
Self-management and self-regulation	< - > Self-awareness and self-knowledge	41.5	1.16	0.983

\**p* < .05.



**Table 6.** Mann–Whitney *U* Test Comparisons for Importance for Primary and Secondary Respondents

	<i>n</i> Primary	<i>n</i> Secondary	<i>U</i>	<i>Z</i>	<i>p</i>
Choice-making	173	121	10100	−0.58	0.561
Decision-making	174	123	8559	−3.46	0.001*
Problem-solving	173	124	10679	−0.08	0.937
Goal setting and attainment	170	122	9616.5	−1.19	0.235
Self-advocacy and leadership	172	121	10006.5	−0.63	0.529
Self-management and self-regulation	173	124	9669.5	−1.68	0.093
Self-awareness and self-knowledge	173	124	9450	−2.00	0.045

\*Significant at Bonferroni-corrected alpha of .007.

**Table 7.** Mann–Whitney *U* Test Comparisons for Frequency for Primary and Secondary Respondents

	<i>n</i> Primary	<i>n</i> Secondary	<i>U</i>	<i>Z</i>	<i>p</i>
Choice-making	167	118	9306	−0.86	0.388
Decision-making	166	121	9146.5	−1.35	0.178
Problem-solving	169	121	9773	−0.69	0.492
Goal setting and attainment	162	119	9070.5	−0.87	0.385
Self-advocacy and leadership	162	117	9316.5	−0.25	0.803
Self-management and self-regulation	164	119	9181.5	−0.88	0.377
Self-awareness and self-knowledge	167	119	9028.5	−1.38	0.167

**Table 8.** Rank Correlations Between Importance and Frequency of Teaching

	<i>n</i>	<i>Rho</i>	<i>t</i>	<i>p</i>
Self-management and regulation	302	0.50	10.02	<0.001*
Problem-solving	308	0.42	8.04	<0.001*
Goal setting and attainment	298	0.39	7.27	<0.001*
Choice-making	305	0.39	7.33	<0.001*
Self-awareness and self-knowledge	304	0.38	7.04	<0.001*
Self-advocacy and leadership	295	0.36	6.64	<0.001*

\*Significant at Bonferroni-corrected alpha of .007.

competencies, with decision-making and problem-solving being ranked significantly higher than goal setting and attainment, and problem-solving being ranked higher than both self-advocacy and leadership and choice-making. Direct comparison with previous research on teaching assistants (E. W. Carter et al., 2011; Lane et al., 2012) is complicated because slightly different response scales were used. More problematically, previous researchers (E. W. Carter et al., 2011; Lane et al., 2012) published separate data on teachers of students with low-incidence and high-incidence disabilities, based on a question about the level of disability exhibited by students with whom they worked most closely. This question was not asked in the current study, thus we could not classify our respondents in a similar way. Moreover, such a

distinction was possibly not meaningful in the current study, given the vast majority of respondents stated that they taught students with high-incidence disabilities and many also indicated they taught students with low-incidence disabilities. Nevertheless, there were some notable consistencies between the present data and those of earlier studies.

Similar high ratings for importance of self-determination were found for Australian teaching assistants in the current study as well as in studies conducted in the US. Lane et al. (2012) reported that, overall, between 74% and 88% of respondents rated competencies to be important (a score of 5–6 on a 6-point scale) and E. W. Carter et al. (2011) reported that 69% and 86% of respondents rated competencies to be important. In the current study, between 94% and 97% of respondents rated each self-determination area of competency as either a 4 (*important*) or 5 (*very important*) on a 5-point scale. Although the range was relatively narrow, problem-solving was rated as the most important skill by teaching assistants in all three studies, followed by choice-making in the Lane et al. (2012) and E. W. Carter et al. (2011) studies, and decision-making in the present study. These findings are also in broad accordance with studies involving teachers (E. W. Carter et al., 2008; Wehmeyer et al., 2000), parents (E. W. Carter et al., 2013), and administrators (E. W. Carter et al., 2015), where problem-solving was ranked the highest or near highest. It is possible that areas that are more easily addressed in the school environment, such as problem-solving and choice-making, may be seen as higher priorities. Goal setting and attainment was the lowest ranked area across all three studies of teaching assistants. This was followed by self-management and self-regulation in Lane et al. (2012), decision-making in E. W. Carter et al. (2011), and self-advocacy and leadership in the present study. Again, this was in general accord with the views of other stakeholders in prior research (E. W. Carter et al., 2008; E. W. Carter et al., 2013; E. W. Carter et al., 2015; Wehmeyer et al., 2000), where goal setting and self-advocacy tended to be lower ranked competencies.

With regard to the reported frequency of instruction provided in self-determination, there was evidence of considerably more variation than for ratings of importance, consistent with the previous findings. Lane et al. (2012) and E. W. Carter et al. (2011) interpreted scores of 5–6 on a 6-point scale as indicating that paraprofessionals taught competencies ‘often’. For students with high-incidence disabilities, Lane et al. (2012) reported the highest ratings for implementation for problem-solving (66% taught often) and choice-making (66% taught often), with the lowest rating found for goal setting and attainment (34% taught often). Similarly, for students with low-incidence disabilities, the highest ratings for implementation were found for problem-solving (67% taught often) and choice-making (58% taught often), whereas the lowest ratings were for goal setting and attainment (36% taught often) and decision-making (42% taught often). The present study mirrored these findings with highest ratings for implementation of teaching for choice-making (75% taught daily or more) and problem-solving (73% taught daily or more), with goal setting and attainment (45% taught daily or more) the least frequently taught. In terms of broader stakeholders, problem-solving was also the most frequent area addressed by teachers (E. W. Carter et al., 2008) and administrators (E. W. Carter et al., 2015), with goal setting and attainment tending to be lower ranked. This is an interesting finding given that goal setting is the first step used to develop self-determination in evidence-based programs, such as the Self-Determined Learning Model of Instruction (Wehmeyer et al., 2012). The apparent lack of focus on goal setting may reflect emphasis on facilitating engagement in the academic curriculum and task completion, which are often reported as a priority for teaching assistants (Butt & Lowe, 2012; M. Carter et al., 2019; Giangreco, 2010b). Given that goal setting tended to be low ranked for both priority and implementation, a greater instructional focus on goal setting may be appropriate.

In the current study, examination of differences between teaching assistants in primary and secondary settings revealed that the only significant difference was for importance of decision-making. The limited differences between assistants working in primary and secondary is broadly consistent with the findings of previous research. Lane et al. (2012) found school level (elementary or secondary) was not predictive of either importance or instructional frequency in low-incidence disabilities. E. W. Carter et al. (2011) found significant differences across school level in importance and ratings for decision-making and goal setting and attainment but no differences for the remaining

competencies. E. W. Carter et al. (2011) argue that decision-making may become more critical for students as they need to plan postsecondary education, careers, and community engagement, so this could account for the higher ratings for this competency for importance and/or instructional frequency. Overall, the limited difference between primary and secondary assistants was somewhat surprising in light of the much greater emphasis in research on adolescents and adults in the research literature (see Chambers et al., 2007), but the apparent recognition of the importance of self-determination in the earlier years of schooling is encouraging.

Moderate correlations were found between perceived importance and reported frequency of instruction, broadly consistent with the levels of correlation previously reported for teaching assistants (E. W. Carter et al., 2011; Lane et al., 2012) and administrators (E. W. Carter et al., 2015) but lower than the correlations reported for teachers (E. W. Carter et al., 2008). Taken at face value, this suggests that greater instructional emphasis is placed on areas of self-determination that are considered more important. Nevertheless, the present study did not address the instructional strategies that teaching assistants employed to address self-determination competencies. In the absence of specific programs and direction, it is possible, if not likely, that teaching assistants may not have the knowledge and skill to effectively address areas of self-determination. Thus, exploration of the nature of the purported instruction in self-determination provided by teaching assistants, under the direction and supervision of qualified educators, stands as a priority for future research.

Teaching assistants appeared to recognise the importance of self-determination competencies but previous research on their behaviours suggests that they may engage in instructional practices that inhibit self-determination rather than foster independence (Broer et al., 2005; Butt, 2016; Butt & Lowe, 2012; M. Carter et al., 2019; Giangreco, 2010b; Giangreco, 2013; Giangreco & Broer, 2007; Griffin & Blatchford, 2021; Rubie-Davies et al., 2010; Sharma & Salend, 2016). Self-determination competencies can be taught both formally and informally using a wide variety of curricula materials across the school day (Lane et al., 2012) and the importance of teaching self-determination across curricular areas is recognised (Palmer et al., 2004). Teaching assistants in the current study had the opportunity for ongoing regular contact, typically working with students across classrooms, and presumably across curricular areas. However, the issue of the appropriate frequency of changing of teaching assistants has been raised (Giangreco, 2021; Griffin & Blatchford, 2021). There are potential advantages and disadvantages of retaining or regularly changing teaching assistants working with a child and, unfortunately, there is a paucity of research on this topic (Giangreco, 2021). Answers to the question of how frequently teaching assistants should be rotated may well be dependent on the nature of the specific student and context.

Nevertheless, with appropriate training and direction from qualified special educators, regular and appropriate contact has the potential to allow teaching assistants to address self-determination competencies formally and informally across the curriculum and may place them in an ideal position to support delivery of instruction aimed at increasing self-determination, at least in focused areas. For example, rather than closely supervising and prompting students to ensure task completion, assistants might teach students to use strategies such as self-monitoring to develop independent task completion (M. Carter et al., 2021) and provide them with the emotional support to use and reflect on these strategies. Such instruction might also offer opportunities to develop related competencies in goal setting (lowest ranked for implementation in the current study), monitoring progress toward goals, self-regulation, and self-instruction. Rather than providing answers, teaching assistants might be able to facilitate independent problem-solving and help students to reflect and evaluate the effectiveness of strategies they employ, actions that have been found to be an important component of the development of self-determination (Wehmeyer et al., 2017). This described role is somewhat similar to the reconceptualised teaching assistant role presented by Griffin and Blatchford (2021) that involves 'gradually supporting the pupils' movement along a continuum from adult-support to pupil control through a scaffolded approach, with the ultimate goal of pupil independence' (p. 210).

More generally, teaching assistants are also well placed to take advantage of informal naturalistic opportunities to develop and reinforce development of self-determination. Thus, teaching assistants

may have a role in helping students to apply and generalise competencies in self-determination across curricular areas. It should be noted, however, that facilitating instruction of this type will depend on appropriate supervision from special educators and comprehensive training, and that these are commonly identified as areas of weakness in teaching assistant support (e.g., M. Carter et al., 2019; Giangreco, 2010a; Giangreco et al., 2010; Howard & Ford, 2007; Zobell & Hwang, 2020). Helping teaching assistants to use frameworks such as the Self-Determined Learning Model of Instruction may provide them with the structure and knowledge needed to utilise naturalistic opportunities when they occur. The extent to which teaching assistants can be prepared to facilitate development of self-determination competencies would appear to be a potentially fruitful area for future research.

### Limitations

A number of limitations of the current study should be acknowledged. The response rate from schools was relatively low and it cannot automatically be assumed that the sample was representative of those in New South Wales or more broadly. It should be noted, however, that many of the key findings replicated those from previous research. Although the present research was directed at mainstream schools, there was no differentiation between teaching assistants working in regular classrooms and those in support units (special classes). However, approximately 89% of the respondents indicated they spent time in providing individual support in mainstream classes on at least a daily basis. Nevertheless, it would be appropriate in future studies to differentiate between assistants working in mainstream classes and those working exclusively in support units (i.e., special classes). Perhaps most importantly, it should also be noted that the study was survey based and only reflected the perceptions of respondents on the issues examined. Direct observational studies of the behaviour of teaching assistants in relation to support of self-determination would represent an appropriate direction for future research. Finally, there were a number of nonresponses or uncodable responses on the self-determination scale. This scale was at the end of what was a fairly long survey and this may have resulted in the level of noncompletion.

### Conclusion

The present study largely replicated the findings of US research with regard to the views of teaching assistants on the importance of self-determination capabilities and reported frequency of instruction. Assistants rated competencies highly in terms of importance but frequency of implementation was more variable. There was also evidence that competencies rated as more important received more frequent instruction. These findings need to be interpreted in the light of considerable previous research that has indicated that behaviours of teaching assistants can inhibit self-determination. Given the nature of contact of teaching assistants with students, they may be positioned ideally to actively contribute to the development of self-determination. Nevertheless, this will be contingent on appropriate training and supervision.

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