Student-teacher and teacher perceptions on the use of visual strategies to support academic language in different groups of learners.

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Submitted in accordance with the requirements for the degree of
BA (Hons) Primary Education Studies

York St John University
School of Education, Language and Psychology

June 2023

Acknowledgements

Contents

Abstract

The situation of academic language acquisition among different groups of learners has been explored with links found between academic language abilities and academic achievement (Townsend et al., 2012). Visual strategies have been used to support the different groups of learners within their learning (Cardillo, 2016). The research project investigates student-teacher and teacher perceptions of using visual strategies to support academic language acquisition in different groups of learners of primary school age. Those learners are pupils with special educational needs and disabilities (SEND), English as an additional language (EAL) and academically 'more able' learners with a more in-depth focus on EAL learners. This was explored in three areas, looking at the role of academic language in the classroom; barriers to learning the groups of learners may face and how visual strategies can help overcome this and perceptions of visual strategies. The research was conducted as a case study using a mixed-methods approach using purposive sampling to carry out two mixed-methods questionnaires to gather data from 32 student-teachers on all groups of learners and then from 18 teachers on EAL learners in an urban primary school. The research findings suggest a positive view from teachers and student-teachers on visual strategies supporting academic language. The visual strategies used differed in their effectiveness in each group of learners. Potential suggestions for the future included practitioners individualising the visual strategies they use for each group of learners to support academic language acquisition effectively.

Word count: 6275 (not including tables, charts, appendices, and references)

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Introduction

This small-scale case study investigates the perceptions of teachers and student-teachers on using visual strategies to support academic language in different groups of learners. The research investigates two areas: student teacher perceptions of visual strategies in supporting the academic language of three groups of learners; English as an additional language (EAL), learners with special educational needs and disabilities (SEND) and academically 'more able' pupils. and teachers' perceptions of how visual strategies support academic language in pupils with EAL. The decision to explore this topic came from the experiences of these groups of learners and noting the use of visual strategies to support them academically, especially with 'academic language'. It delved further into the use with pupils with EAL due to the urban Primary school placement having a high amount of these learners, providing an interesting opportunity to deepen research findings. The research was conducted through two mixed-method questionnaires with 32 student-teacher responses and 18 teacher responses. It is hoped that the research will show the difference in how student teachers and teachers view visual strategies for supporting academic language across the different groups of learners, with visual strategies used to support pupils with EAL and SEND more than more able pupils.

Literature review

The literature review will cover the three themes identified in the existing literature, which were selected to answer the research project's question. The first is the argument on the role of academic language; the second is on barriers to learning for the different groups of learners, how visual strategies can circumvent the barriers, and finally, the perceptions of visual strategies. Definitions of relevant terms are provided for clarification; the existing literature presents a challenge in defining academic language, as it is interpreted and utilized differently across multiple

fields, with differing approaches from both theoretical and research perspectives (Snow and Uccelli, 2009; Jensen and Thompson, 2020). It is often referred to as the 'language of schooling,' 'academic English,' 'scientific language' and 'disciplinary language (Jensen and Thompson, 2020). In education, it is often described as a collection of linguistic features that support active engagement in learning (Schleppegrell, 2004; Heneda, 2014; Bailey and Wilkinson, 2022). While there are many different groups of learners, the literature review will focus on those with English as an additional language EAL, SEND and more able pupils.

The role of academic language

A still-widespread perspective is that the most important aspect of academic language in schools is how much it contrasts with "everyday" language used outside of school (Bunch and Martin, 2020). The argument suggests that students must learn academic language before fully engaging and understanding the subjects taught in school, implying that acquiring academic language is a prerequisite for academic success.

One version of this argument was made by Cummins (1979), who proposed a model that distinguished between basic interpersonal communication skills (BICS), which are everyday conversational language skills and cognitive academic language proficiency (CALP), described as the complex language skills needed for academic tasks. This model emphasises CALP as more cognitively demanding, and less context-dependent compared to BICS. (Cummins, 1979). Originally developed for EAL learners in the United States, Cummins' model has gained recognition in research in various countries, and its continued relevance is evidenced by its frequent reference and application in recent research studies (Uccelli, 2015; Schuth, Kohn and Weinert, 2017). However, Bunch and Martin (2020) argue that there is an excessive emphasis on linguistic features that distinguish between academic and social language and that it can be misleading and detrimental to achieving equitable educational opportunities. Short et al. (2018) contrast this, supporting Cummins's viewpoint, remarking that the differences between social and

academic language and the characteristics of academic language must be considered by teachers. However, they placed academic language in a broader framework of communication, encompassing conceptual, discourse, sentence, and word dimensions. Regardless, they still assumed that academic language is fundamental for academic success.

Bailey and Wilkinson (2022) discuss a deficit perspective of academic language, looking at how academic language can marginalise students learning English, outlining that these groups of students are not supported in their learning due to education's view of the English academic language as the appropriate discourse in schools. Flores and Rosa (2015) further argue that academic language could contribute to oppressing minority students. This perspective links to the following theme, where barriers to learning in different groups of learners are discussed.

Zweirs (2013) found that a common misconception was that teachers interpret academic language as equivalent to vocabulary. Recent studies with similar findings from Heineke and Neugebauer (2018) and Wrenn and Stanley (2022) support the relevance of Zweirs' findings. However, that is not to say that academic vocabulary is not a part of academic language; numerous studies link it as an essential element of academic language (Townsend et al., 2012; Schuth, Kohne and Weinert, 2017).

A consensus in the surrounding literature is the importance and impact of academic language on students' academic success (Townsend et al., 2012; Uccelli et al., 2015; García et al., 2018). Daller et al. (2021) point out that academic language is only one factor, not the singular, that impacts academic achievement, which is important to acknowledge. Nevertheless, this does not diminish the link between academic language and achievement (Jensen and Thompson, 2020). However, Schuth, Kohne and Weinert (2017) argue that despite the vast amount of theoretical support for the idea that academic language influences academic success, there is limited empirical evidence for this based on clear conceptualisations (Townsend et al., 2012). This may indicate a gap in the literature for future research.

Different groups of learners: barriers to learning and visual strategies.

The increasing diversity in mainstream classrooms, including children with disabilities, English language learners, gifted students, and those from diverse cultural and linguistic backgrounds, is a prominent theme in literature (Meyer, Rose, & Gordon, 2014; Evmenova, 2018; Roose et al., 2019). There is a strong emphasis in education, on inclusivity and equal opportunities for all learners, as evident in the guidance provided in the National Curriculum and Early Years Foundation Stage framework (Department for Education (DfE), 2013; DfE, 2021). Research suggests that all learners differ in how they engage in learning, and a standard solution is to differentiate. One way of doing this is by using visual strategies (Meyer, Rose, & Gordon, 2014; Shabiralyani et al., 2015; Evmenova, 2018). Van Staden (2011) defines visual strategies as using visual aids, tools, or techniques to scaffold learning, which can help remove barriers to learning.

The advocation for the inclusion of different groups of learners, such as those with SEND, has become increasingly widespread (O'Brein, 2020; Losberg and Zwozdiak-Myers, 2021; Webster, 2022). Numerous governmental policies reflect this stance, including the legislation the Equality Act 2010 and the SEND Code of Practice (2015), outlining the need to support inclusion and advance equal opportunities in schools for all learners (DfE, 2015; Losberg and Zwozdiak-Myers, 2021). Glazzard's (2011) study examined the barriers to inclusion and identified a gap in the attainment of learners' with SEND the attainment of learners without SEND. Glazzard found an emphasis on raising attainment levels in children with SEND perpetuated a deficit perspective, linking to the deficit perspective of academic language discussed in the previous theme, of these children as teachers feel that SEND learners will harm their performance data and so, cause the perception of them to be bad teachers (Flores and Rosa, 2015; MacSwan, 2020). Promoting inclusion is essential as negative attitudes and discrimination against children with SEND hinder their learning (Maciver et al., 2018; Losberg and Zwozdiak-Myers, 2021). The surrounding literature positively views visual strategies to support learning in pupils with SEND. Studies found that visual strategies helped reduce some challenges of autism and supported those with

behavioural difficulties (Hayes et al., 2010; Cardillo, 2016). By using visual strategies, learners with SEND can easier understand and practice concepts, recall the steps of their learning tasks and provide a reference point to support their confidence and proficiency (Sperroto, 2016; Kajka and Kulik, 2021). However, Hayes et al. (2010) acknowledged that teachers often found them time-consuming and challenging to create.

The Bell Foundation carried out studies in 2020 and 2021 which found that EAL pupils' English proficiency is the primary factor impacting their educational attainment (Strand and Lindorff, 2020; Scott, 2021). This indicates that EAL pupils — particularly those who have not reached competency in English are at risk of underachievement due to language proficiency being a barrier to their learning (Scott, 2021). As discussed in the previous theme, a lack of proficiency in academic language can harm academic achievement, indicating language proficiency as a barrier to learning (Townsend et al., 2012; Kalinowski et al., 2019; Jensen and Thompson, 2020). Despite this, Conteh (2015) suggests that EAL pupils are often assumed to have learning needs when they have language needs and, consequently, provide the wrong support, indicating a deficit ethos regarding EAL pupils (Flores and Rosa, 2015; MacSwan, 2020). The Bell Foundation (2022) identified visual strategies as essential for providing contextual meaning and clues to overcome the language barrier to learning. This is supported by Cadillo's (2017) similar finding that the use of visual strategies helped to scaffold learning by both supporting their English proficiency and circumventing the language barrier.

No national definition of 'more able' learners in England has existed since the Young Gifted and Talented Programme shut down in 2010 (Loft, Long and Danechi, 2020). The accepted definition for this project is given by 'The National Association for Able Children in Education' defining more able learners as those who fall under one or more of these characteristics; learners who have the potential for high attainment; who demonstrate high ability in all or a single area of a subject or curriculum or are comparatively more able to their peers (Sherperd, 2021). Loft, Long and Danechis' (2020) governmental briefing indicates the continuing relevance of 'more able' learners

in education, discussing the need for these learners to be identified and supported. This reveals that a lack of identification can prevent learning, impeding more able learners from reaching their full potential (Winstanley, 2018). There is little literature regarding using visual strategies for more able pupils, but as non-specific literature on visual strategies is positive, it may be presumed that they are also effective for more able learners (Kajka and Kulik, 2021; Lhendup, 2023). Thus, part of this research project will cover visual strategies to support academic language acquisition in more able pupils, making it relevant to fill this gap in the literature.

Perspectives on visual strategies

There appears to be little literature looking into student-teacher perceptions of visual strategies; this research project will attempt to help fulfil this potential gap in the literature.

Cardillo's (2016, pp. 142-143) study looked at the perceptions of six teachers who highly valued using visual strategies in the classroom. The view was that the visuals created interest in learning and thus engaged children in learning. Overall, the teachers felt that visual strategies were most beneficial for those who struggled with visualising and had to learn difficulties such as autism and ADHD, those with language difficulties, especially with reading and overall visual learners. A small-scale study conducted by Awada and Plana (2018) explored the perceptions of 16 teachers regarding strategies for learners with dyslexia. The findings revealed that a significant majority of teachers, 86.23% believed graphic organisers effectively assisted students with understanding ideas, recalling content, and thinking logically about a concept. Graphic organisers are visual displays designed to enhance comprehension of facts, ideas, or terms during a learning task (Huang and Tsapali, 2022; Lhendup, 2023). However, it is essential to note that the study also uncovered some contrasting perspectives among the teachers. Approximately 22.5% of the participants voiced concerns that graphic organisers could confuse students more than verbal explanations. More recent findings from Wiyati and Marlina (2021) support the positive perception

finding that teachers perceived visual strategies positively, feeling they helped both teaching and learning.

Research carried out by Hoan, Dan and Han (2022) looked at perceptions of visual aids by English teachers, although it is essential to acknowledge that it takes place in a high school in Vietnam, meaning the results are harder to generalise to the UK Primary school context, However, despite the contextual differences, the study offers a basis for the understanding of teachers' perspective of visual strategies. They found that teachers had a positive perception of the role of visual strategies in teaching and supporting the learning of the English language. A study conducted by Yunus et al. (2013) found that 96.2% of teachers considered visual strategies one of the most essential tools for teaching. This finding aligns with the broader theme in the literature that teachers view visual strategies as positive and effective for teaching and learning. Supporting this notion, Lhendup (2023) conducted a recent study that further reinforces the positive perception of visual strategies in the classroom. Like Yunus et al. (2013), Lhendup's study revealed that teachers consider visual strategies one of the essential tools for teaching and learning. However, Lhendup's study also found that teachers felt challenges when using modern visual strategies such as technology due to factors such as internet connection. Additionally, the teachers expressed concerns about the time-consuming nature of preparing visual strategies, referring to heavy workloads as a barrier to their ability to prepare and implement in lessons linking to similar perceptions of teachers from Awad and Plana's (2018) study. Overall, the literature indicates teachers as having a positive view of visual strategies in the classroom to support teaching and learning and that it can be beneficial for specific groups of learners such as those with SEND. The literature does suggest that teachers feel the most significant limitation of visual strategies is finding time to create and prepare the strategies and the resources available to implement them.

Conclusion

Overall, this literature review highlights the importance of academic language in supporting children's learning and achievement in the classroom. It also acknowledges that the discussed groups of learners, particularly those with EAL and SEND, face barriers to their learning, which visual strategies can help address. However, there is a lack of literature explicitly focusing on visual strategies for 'more able' pupils and limited research on teacher and student-teacher perceptions of visual strategies. Nonetheless, existing literature suggests positive attitudes towards visual strategies as a valuable teaching and learning tool, aligning with the view that they can effectively remove barriers to learning. These identified gaps present opportunities to explore within this research project.

Research approaches, data collection and ethical considerations

Research approach

The research project investigates student-teacher and teacher perceptions of how visual strategies support academic language. It follows a case study approach, which is suitable for small-scale studies like the current one (Roberts-Holmes, 2018). However, the small sample size limits generalisations to a wider population of teachers, reducing the study's external validity (Roberts-Holmes, 2018; Kumar, 2019). Consequently, they are susceptible to criticism regarding the credibility of the generalisations drawn from their findings (Punch and Oancea, 2014; Denscombe, 2017; Yin, 2018). Nevertheless, Punch and Oancea (2014) and Kumar (2019) indicate that a case study approach allows for an in-depth investigation of real-life situations within a single or small number of settings, making it an appropriate research method for this project (Denscombe, 2017).

Data collection

A mixed methods approach was used to collect data as according to Cresswell and Plano Clark (2017), the strengths of one method can counterbalance the limitations of the other method. Therefore, combining the two methods allows for a comprehensive understanding of the use of visual strategies in supporting academic language acquisition (Cresswell and Plano Clark, 2017; Kumar, 2019).

Questionnaires were chosen as the primary data collection method to gather insights from a small-sample of student-teachers and teachers using both qualitative and quantitative data. Denscombe (2017) outlined that questionnaires offer greater anonymity than other methods as there is no face-to-face interaction. However, a potential limitation is that if respondents do not understand questions, there is little opportunity for clarification (Kumar, 2019). To rectify this limitation, the potentially confusing terminology 'more able' was identified, and a definition was provided to support understanding of the question's meaning and accurate answers. A potential limitation to acknowledge is using only questionnaires to collect data, making it harder to minimise limitations that could be counterbalanced by combining other methods (Cresswell and Plano Clark, 2017). Nonetheless, as explained above, the potential limitations can be minimised as best as possible, and questionnaires offer benefits such as standardised data collection, ensuring consistency among participants' responses (Kumar, 2019).

Purposive sampling involves intentionally selecting participants who fit specific criteria which were student-teachers and teachers due to their experiences and qualifications (Cresswell and Plano Clark, 2017; Denscombe, 2017). The first questionnaire (appendix 1) gathered insights from student-teachers for three groups of learners: SEND, EAL and more able learners. Overall, there were 32 participants recorded. The second questionnaire (appendix 2) focused on teachers' perceptions of visual strategies for EAL learners in a placement school with a significant number of

EAL learners, providing deeper insights into this specific group (Kumar, 2019). There were 18 participants for this questionnaire.

Data analysis

The quantitative data examined the frequency of the strategies used and their effectiveness, gathered from multiple choice and Likert-scale style questions and then coded and analysed (Kumar, 2019). Data was put into tables to present the data visually. In order to analyse the qualitative data from open-ended questions, a deductive approach to thematic analysis was carried out (Coe et al., 2021). Thematic analysis, as described by Sullivan and Forrester (2019), identifies patterns (themes) within data. Once identified, they are analysed for deeper insights (Braun and Clarke 2013). Whilst a benefit of using thematic analysis is its adaptable nature, the lack of explicit guidelines means there is the risk of research not beginning from a sound standpoint (Braun and Clarke, 2016; Sullivan and Forrester, 2019). Guidelines outlined by Braun and Clarke (2016) were followed, including revisiting my code and themes throughout the process to ensure accuracy (Silverman, 2021).

Further analysis specifically focused on comparing the themes related to EAL learners between the two questionnaires. The aim was to identify any similarities or differences in the themes pertaining to EAL within the collected data. To visually present the data, the themes were put into tables to enable easier identification of the themes.

Ethical considerations

Throughout the research project, the ethical guidelines of York St John University were followed, including obtaining ethical clearance and adhering to the ethical clearance form. The British Educational Research Association (2018) provides key ethical guidelines for anyone carrying out educational research, which was followed throughout the research project. Ethical consideration to protect participants from harm was carefully assessed, and measures were taken to minimize the

risk. Informed consent was gathered from the gatekeeper – the headteacher of the Primary school for the second questionnaire (appendix 2) and the participants of both questionnaires – teachers and student teachers gathered before data collection. Participants were informed of their right to withdraw their consent at any time. Additionally, it was ensured that the identity of participants was anonymous throughout. The Data protection act (2018) was adhered to throughout, with all data kept confidential and stored in line with the university's protected one drive. All data was destroyed after project completion (Kumar, 2019).

Findings

Student-teacher perceptions

The first questionnaire examines student-teacher perceptions of using visual strategies to support academic language (appendix 1). As shown in Figure 1, the findings indicate that student teachers use visual strategies for pupils with SEND the most. Of the 32 student-teacher respondents, 68% used visual strategies to support academic language in pupils with SEND and 56% and 50% for EAL and more able pupils. Comparing this with the effectiveness of visual strategies, student-teachers rated the effectiveness from 1-5 (not effective-very effective). Figure 1 indicates that student teachers find visual strategies as nearly equally effective for both SEND and EAL learners, with mean averages of 4.4 and 4.5. However, student-teachers felt that visual strategies were the least effective at supporting academic language in more able pupils, with a mean score of 3.6.

SEND		EAL		More able	
Frequency	Effectiveness (mean average)	Frequency	Effectiveness (mean average)	Frequency	Effectiveness (mean average)
68%	4.4	56%	4.5	50%	3.6

Figure 1

Figure 2 indicates that 84% of student teachers used photographs/images for pupils with SEND, followed by vocabulary mats (78%) and flashcards and technology tied at 75%. For pupils with EAL, figure 2 also shows photographs/images as the most used at 78%. Technology was the second most used for EAL pupils, with a frequency of 75%, followed by flashcards at 63%. Notably, both EAL and SEND learners have the same strategies in their top three used strategies. However, the strategies used with more able pupils differ from the previous two groups, with a joint percentage of 75% for the most used strategy for displays and flashcards; technology closely follows at 72%. Notably, technology across all three groups of learners has been similarly used, with 75% for SEND and EAL and 72% for more able learners. The third most used strategy was models used by 63% of student-teachers. It is also necessary to note that the only response in the "other" category for visual strategies used by student teachers was "Pictorial Exchange Communication cards" for SEND, which was classified under flashcards.

Visual strategy	Frequency (%)		
	SEND	EAL	More able
Photograph/images	84%	78%	34%
Posters	66%	50%	53%
Flashcards	75%	63%	25%
Displays	69%	56%	75%
Videos	66%	47%	75%
Models	63%	50%	63%
Realia	47%	38%	41%
Graphic organisers	56%	38%	59%
Technology	75%	75%	72%

Speaking/writing frames	69%	53%	22%
Vocabulary mats	78%	59%	41%
Actions	69%	59%	44%
Other	3%		

Figure 2

The qualitative data examined how student-teachers use visual strategies to support academic language (appendix 1). Through thematic analysis, themes were identified on how visual strategies are implemented, focusing on the top two themes for each group of learners (figure 3). Both SEND and EAL groups of learners had the same themes from the analysis, with student-teachers discussing how they use visual strategies to help contextualize the academic language in its environment for understanding. Vocabulary was a theme drawn from the thematic analysis, which student teachers discussed as using visual representations alongside the word to support acquisition of the vocabulary needed for the subject. The findings show that student-teachers that support academic language in EAL and SEND pupils require the same strategies. The analysis identified two different themes for supporting more able pupils. Student-teachers discussed how the most common use of visual strategies was to support the understanding and acquisition of more complex academic language in more able pupils; following this is using visual strategies to reinforce key vocabulary.

Learner	Top two themes
SEND	1. Language context 2. Vocabulary
EAL	1. Vocabulary 2. Language context

More able	1. Complex language
	2. Vocabulary

Figure 3

The student-teachers were asked to rate the effectiveness of visual strategies in supporting academic language on a scale of five (not effective-most effective). Figure 2 shows that the top three most effective strategies for both SEND and EAL learners were fairly similar to the top three most used strategies. Photographs/images remain in the 'first' place for both groups, with a mean average of 4.4 for effectiveness for SEND pupils and 4.7 for EAL pupils. Technology and videos were the next most effective strategies for SEND pupils, with mean averages of 4.3 and 3.9. For EAL pupils, flashcards were rated a mean average of 4.41 and technology, 3.9. Comparatively, for the more able group of learners, the student-teachers had rated none of the most used strategies as the top three in effectiveness, which contradicts the frequency of the strategies in Figure 2. Instead, graphic organisers were seen as the most effective strategy for academic language, with a mean average of 3.94, vocabulary mats at 3.9 and actions at 3.71.

SEND		EAL		More able	
Strategy	Mean average	Strategy	Mean average	Strategy	Mean average
Photographs/images	4.4	Photographs/Images	4.7	Graphic organisers	3.94
Technology	4.3	Flashcards	4.41	Vocabulary mats	3.9
Videos	3.9	Technology	3.9	Actions	3.71

Figure 4

Student-teachers were asked about barriers to using visual strategies to support academic language (appendix 1). One of the themes that arose related to all learners suggesting that they might become reliant on visual resources and neglect using speaking and listening skills. The second theme that emerged was specifically for more able learners with student-teachers feeling when not correctly implemented visual strategies can prevent extending the children's learning.

Overall, student-teacher perceive visual strategies for all learners positively, but they are most used for pupils with SEND. Student-teachers indicate a similar use and rating of effectiveness of strategies for SEND and EAL pupils, whereas visual strategies are used and rated less effective with more able pupils.

Teacher perceptions

The second questionnaire examined teacher perceptions of how visual strategies support academic language acquisition in pupils with EAL within an urban primary school (appendix 2). Figure 5 indicates that teachers used photographs/images the most to support academic language in EAL learners, with a frequency of 72%. This finding is similar to the previous questionnaire (appendix 1), where the frequency of photographs/images used was 78%, and the highest rated strategy for EAL learners (figure 2). However, the other strategies in the top two differ, with 67% of teachers using displays and 61.1% using vocabulary mats.

Strategy	Frequency (%)
Photographs/images	72%
Displays	67%
Vocabulary mats	61.1%

Figure 5

Comparatively, the teachers were asked to rate the effectiveness of the strategies from 1-5 (not effective-very effective). As shown in Figure 6, the top three strategies were very close in their mean average ratings, with technology having a mean average rating of 5. Technology was also

rated 3.9 by the student-teachers and was one of the topmost effective strategies for EAL pupils (figure 4). Combined with the teachers' ratings, this indicates that technology may be beneficial in supporting academic language for EAL learners (figure 2). Realia was rated a 4.8, followed by photographs/images with 4.75. The mean average for photographs/images is very close to the student-teacher mean average for photographs/images, which was 4.7 (figure 2), suggesting an overall accuracy in the mean average result and perception of photographs/images as being very effective.

Strategy	Mean average
Technology	5
Realia	4.8
Photographs/images	4.75

Figure 6

The follow-up qualitative data asked teachers to explain how they use visual strategies to support academic language (appendix 2). Thematic analysis revealed vocabulary as the most frequent theme from the analysis, as also identified by student-teachers in the previous questionnaire (appendix 1).

Overall, the teachers viewed using visual strategies to support academic language in EAL pupils positively. They primarily used photographs/images but rated technology as the most effective strategy. However, there was an overall difference between the strategies used and the most highly rated strategies.

The findings from both questionnaires suggest an overall positive perception towards visual strategies supporting academic language for all groups of learners. Notably, they were used and rated as the least effective for more able learners. SEND, and EAL learners had the same three most used strategies, suggesting a connection in how both groups of learners are supported.

Discussion

Regarding the use of visual strategies to support academic language, a significant proportion of student-teachers ranging from 50% to 68%, recognised the importance of this support for the groups of learners. While a minimum of 50% may not represent an overwhelming majority, it still signifies a notable proportion of student-teachers who recognise academic language proficiency as separate from conversational language (Short et al., 2018). Supporting this, numerous studies indicate the link between academic language proficiency in promoting academic progress and achievement (Cummins, 2014; Bunch and Martin, 2020; Bailey and Wilkinson, 2022). As both questionnaires had small sample sizes, it was surprising that the use of visual strategies to support academic language was not higher with pupils with EAL and SEND although less so with more able learners as they will most likely already have adequate academic language proficiency.

A common misconception regarding pupils with EAL is that poor language ability, including academic language, can be confused with cognitive difficulties (Graf, 2011). Data from Figures 2 show the top three similar ratings on the effectiveness of visual strategies on academic language for those with SEND and EAL, potentially reflecting this misconception. Graf (2011) also acknowledges that student teachers are more likely to make this misconception due to a lack of experience, which could be reflected in these findings. Kumar and Hamer (2013) state that student-teachers often perceive a lack of academic language proficiency as a deficit supporting the interpretation of the data in indicating this misconception in student-teachers. This may potentially be due to a lack of training or experience in this area (Goddard and Evan, 2018). However, the similarity in the rating of effectiveness of the strategies with these two groups of learners may contradict the deficit view of treating pupils with EAL and SEND as the same.

In figures 2 and 4, it was found that the top three most used strategies and the strategies rated most effective by student-teachers for SEND and EAL learners remained relatively consistent.

Regarding more able learners, the most frequent visual strategies used for academic language differing from the top three most effective strategies was not expected. Alfin et al. (2019) found that student-teachers can feel visual strategies take too long to prepare, which may be why they use visual strategies they are most comfortable with or take the least time to prepare. However, the strategies used by teachers to support EAL learners, indicated in figure 5, mainly differed from those used by student-teachers suggesting a change in perceptions as experience is gained. Contrasting student-teachers, the top three strategies most used by teachers to support EAL learners differed from what they rated as most effective. Therefore, it could be considered for both teachers and student-teachers that the visual strategies that there is a potential use of the most convenient strategies over the most effective, potentially more time-consuming visual strategies (Kathirvel and Hashim, 2020).

Thematic analysis revealed a common theme, as shown in Figure 3, of student teachers using visual strategies to support the acquisition of academic vocabulary for each group of learners. Heineke and Neugebauer (2018) state that a frequent misconception of academic language is that it is synonymous with academic vocabulary and does not factor in the linguistic features used as part of academic language. As the theme of student teachers describing using visual strategies to support academic vocabulary is apparent across all groups of learners, this may contribute to reinforcing the misconception identified in the literature (Nagy and Townsend, 2012). In the second questionnaire (appendix 2), the supporting of vocabulary in pupils with EAL is also a theme within the teachers' answers, further enforcing the reliability of the findings with regards to the use of visual strategies with EAL learners but also showing the potential misconception within both student teachers and teachers.

Baker et al. (2014) asserts that providing a contextual framework to support CALP development and promote the independent use of context-reduced academic language is important. Using visual strategies to provide context for academic language is a common theme among SEND and

EAL learners. These student-teacher experiences indicate that academic language is supported in the earlier - contextually based stages of the pupils' academic language development. The same theme was also found within the teachers' perceptions of pupils with EAL (appendix 2), providing further consistency and credibility to the data for EAL learners and potentially academic language. This is corroborated by Ranney (2012), who advises using visuals to provide academic language with context whenever it may be inaccessible.

The differing use in the second theme regarding using visual strategies to support complex academic language among more able learners may indicate the recognition of varying needs for academic language support. For example, while EAL and SEND learners may require context for academic language, more advanced learners have attained sufficient proficiency and can work with context-reduced language (Baker et al., 2014). However, they may still benefit from visual strategies to support using more complex academic language. The finding that student-teachers consider graphic organisers the most effective strategy could be attributed to their versatility in scaffolding different abilities, including more able learners. The individualised support graphic organisers provide may facilitate the development of complex academic language skills. (Green and Dillard, 2021).

Limitations

The limitation of this research project is that it was small-scale with small-sample sizes of 32 and 18 participants for each data collection method, making it difficult to generalise and, therefore, could reduce the reliability of the research (Kumar, 2019). However, case studies are often naturally small-scale as they provide the opportunity to investigate further in-depth into the perspectives of the research area of teachers and due to the gap discussed within the literature review, student-teacher views (Robert-Holmes, 2018). While the research project has provided useful findings, it is essential to acknowledge its limited scope as it specifically targeted learners with SEND, EAL, and more able learners, which may restrict the generalisability of the findings to

other learner groups and contexts (Kumar,2019). However, as Punch and Oancea (2014), this approach allowed for a deeper insight into views on visual strategies supporting academic language in these specific groups. Nonetheless, future research could benefit from exploring a wider range of learner groups to enhance the generalisability and applicability of the findings.

Using two questionnaires as the data collection method had limitations that need to be acknowledged; self-report bias and the possibility of misinterpretation of questions can impact the validity and reliability of the data (Kumar, 2019). However, Kumar (2019) acknowledges that questionnaires can provide a standardised measure ensuring all participants respond to the same data set for comparability (Kumar, 2019). While the two questionnaires have different sets of questions, their use still provides a standardised measure within their respective groups. Future research could explore other data collection methods, such as observations and interviews, to provide a more comprehensive understanding of the research findings (Punch and Oancea, 2014).

Implications for future practice

This section will discuss the implications of the findings for future practice and will refer to teachers and student-teachers as practitioners as the implications address their practice in current or future classrooms.

When considering the implications for future practice addressing misconceptions and building awareness could support promoting best practice for academic language acquisition. Practitioners may need professional development and training from either universities or schools to address misconceptions about language difficulties and cognitive difficulties among pupils with EAL. To foster a supportive learning environment, universities and school leaders may address these misconceptions of viewing groups of learners such as those with SEND and EAL as deficit and encourage practitioners to recognise the learning potential and strengths of all groups of learners. This perspective could extend to include other groups who may be adversely affected by a deficit view. The findings indicate the need for universities and schools to provide training on academic

language, being more than only vocabulary to support practitioners to provide full support in developing pupils' academic language.

It could be said to be important for practitioners to recognise the disparity between commonly used visual strategies and those most effective for more able learners and between student-teachers and teachers for pupils with EAL. Therefore, a suggestion could be that practitioners should be supported by universities and school leaders to be trained on effective visual strategies for supporting students' academic language development for these two learners. This could cover efficient practices in preparing and implementing visual strategies to minimise the time constraints they may face while also ensuring the continued effectiveness of the visual strategies.

Another implication could be for the diverse needs of all learners to be considered when using visual strategies rather than a 'one size fits all' approach, with practitioners selecting visual strategies that align with the specific needs of each learner group to meet the differing levels of academic language proficiency. In addition, other groups of learners, not just the ones viewed as having an academic language 'deficit,' should be provided with visual strategies to support their academic language development, such as more able pupils who, despite being viewed as up to the standard of proficiency, can be challenged to develop more complex academic language skills further. This will all be considered within my future practice, with intentions to further my own best practice with careful considerations of these implications in planning and carrying out teaching with the use of visual strategies to support academic language. In addition, to continue with professional development to ensure the effective support of academic language development with all groups of learners.

Conclusion

Overall, the research project aimed to look at teacher and student-teacher perceptions of how visual strategies support academic language in different groups of learners. The study found that

both teachers and student teachers recognise the importance of academic language proficiency but found disparities in the use of visual strategies and perceived effectiveness for the different learner groups. Similarities in use for student-teachers were found for pupils with EAL and SEND but differed for more able pupils and within the strategies most used for and rated most effective by teachers for pupils with EAL as well as contrasting student-teachers answers regarding pupils with EAL.

The findings can potentially impact both teachers and my future practice by helping inform on the need for individualised use of visual strategies for each group of learners to ensure academic language is supported and continually developed no matter the proficiency level. In addition, awareness of personal misconceptions surrounding certain groups of learners can help support effective teaching of academic language and therefore, improve academic achievement in the classroom.

The findings of this study have the potential for transferability to other teachers and settings. They provide insights into the use of visual strategies for supporting academic language. By implementing these findings, practitioners with diverse learners can enhance their teaching practices, such as applying visual strategies and creating inclusive learning environments that effectively support academic language development.

The generalisability of the findings to a wider population is limited due to being a small-scale project. However, despite these limitations, valuable insights may still be gained, and tentative generalisations can be made based on the observed patterns, which may offer preliminary indications of how similar situations may occur in similar contexts, which could offer a foundation for future research.

Future research could delve further into specific visual strategies and their effectiveness in supporting academic language development among different learners. There could also be research conducted among a wider sample and be longitudinal to provide an improved

representation of the population and increase the validity of the findings. Furthermore, other data collection methods, such as interviews, could be carried out to provide robustness to the data.

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Appendices

Appendix 1

Questionnaire 1: Student teacher perceptions of how visual strategies are used to support academic language in different groups of learners

1. Which groups of learners do you have experience of working with? [please select all that apply]

- SEND (Special education needs and disabilities) (1)

- EAL (English as a second language) (2)

- More able pupils (6)

2 Please select which visual strategies you have used or have seen used to support each group of learners.

	SEND	EAL	More able
Photographs/images	●	●	●
Posters	●	●	●
Flashcards	●	●	●
Displays	●	●	●
Videos	●	●	●
Models	●	●	●
Realia (real objects) e.g., an actual frog.	●	●	●
Graphic organisers e.g., graphs, charts,	●	●	●

diagrams, timelines

etc.

Technology	•	•	•
Speaking/writing frames	•	•	•
Vocabulary mats	•	•	•
Actions	•	•	•
Other [please specify]	•	•	•

3. How have you used visual strategies to support academic language acquisition for each group of learners?

If not applicable, put N/A in the textbox.

      ○   SEND (1) _____

      ○   EAL (2) _____

      ○   More able (3) _____

4. Rate the effectiveness of the visual strategies you have used to support academic language acquisition for **children with SEND.** Leave blank if not applicable. 1 = Not effective   5 = Very effective

Photographs/images   ☆ ☆ ☆ ☆ ☆

Posters	☆ ☆ ☆ ☆ ☆
Flashcards	☆ ☆ ☆ ☆ ☆
Displays	☆ ☆ ☆ ☆ ☆
Videos	☆ ☆ ☆ ☆ ☆
Models	☆ ☆ ☆ ☆ ☆
Realia (real objects) e.g., an actual frog.	☆ ☆ ☆ ☆ ☆
Graphic organisers e.g., graphs, charts, diagrams, concept map, timelines etc.	☆ ☆ ☆ ☆ ☆
Technology	☆ ☆ ☆ ☆ ☆
Speaking/writing frames	☆ ☆ ☆ ☆ ☆
Vocabulary mats	☆ ☆ ☆ ☆ ☆
Actions	☆ ☆ ☆ ☆ ☆
Other	☆ ☆ ☆ ☆ ☆

5. Rate the effectiveness of the visual strategies you have used to support academic language acquisition for **children with EAL.** Leave blank if not applicable. 1 = Not effective   5 = Very effective

Photographs/images   ☆ ☆ ☆ ☆ ☆

Posters   ☆ ☆ ☆ ☆ ☆

Flashcards   ☆ ☆ ☆ ☆ ☆

Displays   ☆ ☆ ☆ ☆ ☆

Videos   ☆ ☆ ☆ ☆ ☆

Models   ☆ ☆ ☆ ☆ ☆

Realia (real objects) e.g., an actual frog.   ☆ ☆ ☆ ☆ ☆

Graphic organisers e.g., graphs, charts, diagrams, concept   ☆ ☆ ☆ ☆ ☆
map, timelines etc.

Technology   ☆ ☆ ☆ ☆ ☆

Speaking/writing frames   ☆ ☆ ☆ ☆ ☆

Vocabulary mats ☆ ☆ ☆ ☆ ☆

Actions ☆ ☆ ☆ ☆ ☆

Other ☆ ☆ ☆ ☆ ☆

6. Rate the effectiveness of the visual strategies you have used to support academic language acquisition for **more able pupils.** Leave blank if not applicable. 1 = Not effective 5 = Very effective

Photographs/images ☆ ☆ ☆ ☆ ☆

Posters ☆ ☆ ☆ ☆ ☆

Flashcards ☆ ☆ ☆ ☆ ☆

Displays ☆ ☆ ☆ ☆ ☆

Videos ☆ ☆ ☆ ☆ ☆

Models ☆ ☆ ☆ ☆ ☆

Realia (real objects) e.g., an actual frog. ☆ ☆ ☆ ☆ ☆

Graphic organisers e.g., graphs, charts, diagrams, concept ☆ ☆ ☆ ☆ ☆
map, timelines etc.

Technology ☆ ☆ ☆ ☆ ☆

Speaking/writing frames ☆ ☆ ☆ ☆ ☆

Vocabulary mats ☆ ☆ ☆ ☆ ☆

Actions ☆ ☆ ☆ ☆ ☆

Other ☆ ☆ ☆ ☆ ☆

7 How effective is the use of visual strategies as a whole to support academic acquisition in the different groups of learners? Select the appropriate answer. 1 = Not effective 5 = Very effective

	1	2	3	4	5	Not applicable
SEND						☐
EAL						☐
More able						☐

8 Have you faced any barriers with using visual strategies to support academic language acquisition with any of the groups of learners?

_____

9 Is there anything else you would like to add about the use of visual strategies to support academic language acquisition in different groups of learners?

Appendix 2

Teachers' perceptions of the use of visual strategies to support academic language in EAL learners.

Q1. Do you use visual strategies to support the academic language of pupils with EAL (English as an additional language)?

Yes

No

Q2 Please select the visual strategies you use.

☐ Photographs or images, e.g., a picture of a frog

☐ Posters

☐ Flashcards

☐ Displays

☐ Videos

☐ Models

☐ Realia (real objects) e.g., an actual frog

☐ Graphic organisers (key visuals) e.g., graphs, charts, diagrams, timelines etc.

☐ Technology

☐ Bilingual glossaries e.g., pupil writes down new vocabulary for a topic/ subject in their first language with pictures

☐ Visual / bilingual dictionary

☐ Speaking/writing frames

☐ Body language

☐ Vocabulary mats

☐ Other – please state the visual strategy

Q3. Explain how you use the visual strategies to support academic language in pupils with EAL.

Photographs or images, e.g., a picture of a frog _____

Posters _____

Flashcards _____

Displays_____

Videos_____

Models _____

Realia (real objects) e.g., an actual frog _____

Graphic organisers (key visuals) e.g., graphs, charts, diagrams, timelines

etc. _____

Technology _____

Bilingual glossaries e.g., pupil writes down new vocabulary for a topic/ subject in their first

language with pictures _____

Visual / bilingual dictionary _____

Speaking/writing frames _____

Body language_____

Vocabulary mats_____

Other _____

Q4. Rate the visual strategies on a scale of 1-5 on how effective they are at supporting academic language in pupils with EAL.

	1	2	3	4	5

Photographs or images, e.g., a picture of a frog

Posters

Flashcards

Displays

Videos

Models

Realia (real objects) e.g., an actual frog

Graphic organisers (key visuals) e.g., graphs, charts,

diagrams, timelines etc.

Technology

Bilingual glossaries e.g., pupil writes down new

vocabulary for a topic/ subject in their first language with

pictures

Visual / bilingual dictionary

Speaking/writing frames

Body language

Vocabulary mats

Other – please state the visual strategy