



**FEEDBACK METHODS IN VOCATIONAL EDUCATION AND TRAINING FOR SUPPORTING STUDENTS WITH LEARNING DISABILITIES AND/ DIFFICULTIES IN LEARNING:
A LITERATURE REVIEW**

Evelyn Ansah Karkkulainenⁱ,

Kaisa Pihlainen,

Eija Kärnä

School of Educational Sciences and Psychology,
University of Eastern Finland,
Yliopistokatu 6, 80101,
Joensuu Campus, 80101,
Metla Building,
Finland

Abstract:

Purpose: Feedback is considered to motivate students and enhance their learning. In Vocational Education and Training (VET) and workplace settings, feedback methods have been implemented to ensure a better connection between teaching and learning. However, to date, not much seems to be known about feedback methods used on students with learning disabilities/difficulties in VET. This literature review study examines the current feedback methods and outcomes among students with disabilities and/or difficulties in learning in vocational education, training, and workplace settings. **Methods:** For this purpose, ERIC, PubMed, Scopus, ProQuest, Google Scholar, and Web of Sciences were used to identify relevant literature between 2015 and 2022. The review was conducted following the PRISMA-P guidelines. Amongst the studies identified, four studies met the inclusion criteria to be included in the study. The feedback methods identified in the studies include videotaped feedback dialogues between students and teachers, video modelling with video feedback interventions, peer feedback through collaborative writing activities, and a combined peer-teacher feedback method. **Findings:** The results showed that students received feedback from peers, teachers, and instructors in vocational education and training schools and workplace settings. The feedback, such as communication, reflection, and practical learning capabilities, assisted these students with their working lives. It significantly impacted their learning capacity, enhanced their persistence, increased their perceived abilities, enabled them to understand their learning development better, and improved their performance as they acquired new skills by doing tasks. **Conclusion:** Generally, the feedback methods were perceived as supportive,

ⁱ Correspondence: email evkarkk@uef.fi, kaisa.pihlainen@uef.fi, eija.karna@uef.fi

constructive, and motivating, prompting reflection and inspiring performance. Notwithstanding, more research on feedback methods and their outcomes on students with learning disabilities/difficulties in vocational education and workplace settings is needed. This must be in conjunction with research on how these same students experience/perceive the feedback methods used on them. This will enable new measures to facilitate the effective transition from school to employment for this category of VET students.

Keywords: feedback methods, Vocational Education and Training (VET), learning difficulties or difficulties in learning

1. Introduction

Vocational Education and Training (VET) is a critical pathway for many individuals to acquire the skills and knowledge necessary for successful careers. However, students with disabilities/difficulties in learning often face additional learning challenges in VET programmes due to their unique learning needs. Providing effective feedback to these students is crucial to supporting their learning and ensuring their success in VET programmes. This literature review aims to examine feedback methods in VET that have been shown to be effective in supporting students with learning difficulties/disabilities.

The emphasis is on VET since feedback is an essential element of successful teaching and learning and is essential to helping students acquire learning experiences that are relevant in the workplace and beyond, including real-world skills, attitudes, understanding, and knowledge that support people to live healthy and fulfilling lives (UNESCO, 2023).

This literature review aims to explore and understand the feedback methods utilised with students with disabilities and/or difficulties in learning by synthesising the existing research between 2015 to 2022. By synthesising the existing research, this review provides insights into the best practices and strategies for supporting students with disabilities and/or difficulties in learning in VET programmes. The review findings will be helpful for educators, policymakers, and researchers interested in improving the quality and inclusivity of VET programmes for all students.

This review begins with a discussion of the key concepts and definitions related to feedback in VET, including an overview of the challenges faced by students with disabilities and/or difficulties in learning in VET programmes. It then examines the feedback methods used in VET, including videotaped feedback dialogues between students and teachers, video modelling with video feedback interventions, peer feedback through collaborative writing activities, and combined peer-teacher feedback methods. The review will also consider the implications of feedback methods used in VET.

2. Background

2.1. Vocational Education and Training (VET)

Vocational education and training enable students to acquire and develop professional competencies through educational and training activities where students obtain new knowledge, develop new skills, and form new attitudes relevant to their chosen career paths (Wolf, 2011). Vocational education takes place primarily in vocational institutes and workplaces where students learn to integrate information, skills, and attitudes while forming a professional identity (Schaap et al., 2012; Baartman & De Bruijn, 2011; Achtenhagen & Grubb, 2001). However, the teaching and learning processes in school and workplace learning environments are not without significant challenges. These challenges relate to the double VET schools' rationales of learning theory and practice in different yet connected environments.

Nevertheless, successful VET programmes are common in countries with a close alliance between students, institutions, and workplaces (Virtanen & Tynjälä, 2008; Virtanen et al., 2014). Students generally complete effective school-based learning alongside extensive workplace learning experiences in these contexts, allowing them to contextualise their theoretical knowledge. Companies collaborate with VET institutions through sectoral and regional corporations in such cases. In the case of Finland, this involves cooperation in curriculum design, course preparation, making assessments, enabling workplace training, and school-to-work transition with dependable feedback at each step of the learning process (CEDEFOP, 2019).

2.2. Learning Difficulties/Disabilities

Learning difficulties refer to intellectual and cognitive impairments (McDowell, 2018), and they have significantly impacted many individuals' academic and work performance (Sze, 2010). With regards to VET, Lenhard and Lenhard (2013) showed that *learning difficulties* is perceived as a generic term presenting academic challenges of diverse origins that students encounter. They argue that general learning discrepancies and low academic presentation, for instance, in terms of disabilities and specific forms of disorders, characterise it. The terminology depicts several meanings that attempt to separate between general and precise forms of learning difficulties, including in reading, spelling, writing abilities, arithmetic disorders, emotional difficulties, etc., or highlight the constancy of the learning difficulties. Besides, Hakkarainen and Holopainen (2016) argue that most students who experience learning difficulties prefer VET to high school. Similarly, Bacca et al. (2015) contend that teachers in VET institutions face significant challenges in the classroom due to a wide range of special educational needs in students, which correspond to the student's lack of competence, attention, motivation, confidence, and background knowledge, among other factors. Such students frequently have difficulty integrating information, skills, and attitudes since they require cognitive and critical reflection skills (Baartman & De Bruijn, 2011). For instance, mathematical and reading difficulties, as well as socioemotional and behavioural problems, significantly

impact students' educational careers. However, different support services such as feedback methods can support students in different ways to acquire the necessary knowledge and skills required for work life.

2.3. Feedback

Feedback is an essential component of learning, and its development is critical to making education inclusive and effective for VET students (Wuttke et al., 2020). It can significantly impact students' learning capacity, enhance their persistence, increase their perceived abilities, enable them to understand their learning development better, and improve their performance via the acquisition of new skills and tasks, especially when it is nonevaluative, supportive, timely, and specific (Wisniewski et al., 2020; Hattie & Gan, 2011; Adie et al., 2018; Wu & Schunn, 2021). Students' feedback includes praise, punishment, incentives, and corrective feedback with low to medium impacts on average students (Calderón & Segura, 2021; Indrawati et al., 2021).

Notably, teacher feedback can improve cognitive, psychomotor, and affective domains in teaching and learning (Grawemeyer et al., 2015; Ahea, 2016) and assist students in identifying and interpreting the evidence of their capability and enhance their ability for their next performance (Black & Wiliam, 2018).

In some cases, students appreciate teachers' feedback on the content of their work even though they do not perceive it as an intrinsically motivating part of teacher assessment (Mäkipää & Hildén, 2021). Some interpret feedback as a positive feedback valence when it delivers some performance approval. This indicates that effective feedback impacts the quality of students' subsequent performances and motivates them to be involved in learning, an endeavour that can be regarded as improving their learning experiences (Gamlem & Smith, 2013). Nonetheless, some students consider feedback unbeneficial when it requires them to perform tasks they have not yet mastered (Gamlem & Smith, 2013).

3. Methodology

The research method is based on procedural steps for systematic literature reviews (Petticrew & Roberts, 2006).

3.1. Data Source and Search Strategy

This review study included the following keywords: learning difficulties/disabilities, feedback methods, vocational education and training, learning difficulties and student experiences. Relevant literature for this study was searched from five electronic databases, including PubMed, Scopus, Web of Sciences, Eric, EBSCO, and the Google Scholar search engine. The search was based on the keywords learning difficulties, learning disabilities, feedback methods, vocational education, and training. Boolean operators such as AND, NOT, and OR were used between keywords to expand or narrow the search parameters.

3.2. Inclusion and Exclusion Criteria

The review focused on studies published online in English between 2015 and 2022. This was meant to guarantee the most recent publications on feedback methods in VET, given that one important reason for the study was to provide insights into the best practices and strategies for supporting students with disabilities and/or difficulties in learning in VET. Additionally, Table 1 presents other inclusion and exclusion criteria for the study.

Table 1: The inclusion and exclusion criteria

No.	Inclusion criteria	Exclusion criteria
1	The article was published in the English language	The article was published in different languages, e.g., French, and Chinese
2	The article examined feedback among students with disabilities and/or difficulties in learning in VET	The article did not examine feedback among students with disabilities and/or difficulties in learning in VET
3	The articles outlined a feedback method	The article did not focus on feedback methods
4	The article was published in peer-reviewed journals	The article was published in book chapters, conference papers, or as review articles

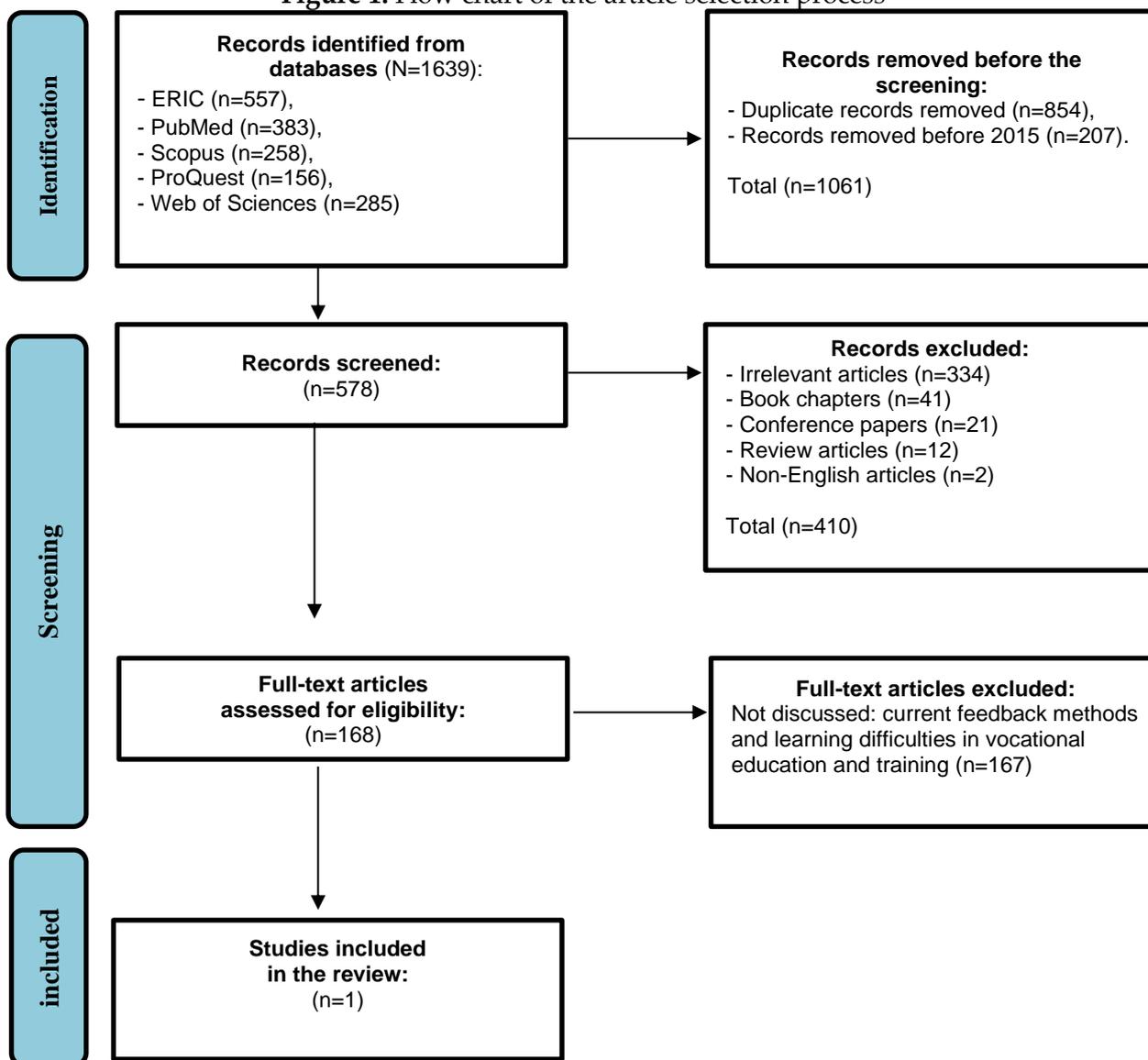
3.3. Literature Selection

Titles and abstracts of articles from the search results were evaluated based on inclusion and exclusion criteria as stated in Table 1. Those that did not meet the inclusion criteria were immediately excluded. Those that met the inclusion criteria at the title and abstract levels were then fully read, and those that met all the requirements were included.

From an initial search of the different electronic databases (Figure 1), 1639 studies were identified, including ERIC (n=557), PubMed (n=383), Scopus (n=258), ProQuest (n=156), and Web of Sciences (n=285). Among these studies, we excluded 854 duplicated studies, and 207 were later excluded as they were published before 2015. In the screening process, 578 studies were retrieved, and 410 studies were excluded. 334 were excluded because of the focus of the study – 41 because they were not published in peer-reviewed journals but as book chapters; 21 because they were conference papers, 12 because they were review articles; and 2 because they were published in a language other than English. In all, 168 full-text studies met the general eligibility criteria, but 167 were excluded because they did not particularly discuss feedback methods among students with learning disabilities and/or difficulties at VET institutions. Therefore, the study's data collection process included only one article (English et al., 2017) from the literature selection exercise.

Considering that one study would not be good enough for a literature review study on feedback methods among students with learning disabilities and/or difficulties in vocational education and training, Google Scholar was consulted as an additional data source for more studies. The same search criteria utilised in Sections 3.2 and 3.3 were considered to obtain additional studies. From the Google Scholar search results, three studies – Dekker-Groen et al. (2015), Ortoleva and Bétrancourt (2016), and Nguyen (2018) – met the inclusion criteria, which brought up the number of included studies to four in total.

Figure 1: Flow chart of the article selection process



4. Results of the Selected Literature

All studies included in the review are published in peer-reviewed journals with analyses from across the following disciplines: nursing education, health and social care assistance, standard gardening, and English writing skills.

Only English et al. (2017) met the inclusion criteria from the search results from the different databases. The three other studies that met the inclusion criteria were sourced from the Google Scholar search engine. The studies — Dekker-Groen et al. (2015), Ortoleva and Bétrancourt (2016), and Nguyen (2018) — were conducted in the Netherlands, Switzerland, and Thailand, respectively. As indicated in Table 2, all the studies used different study designs and feedback methods for students with learning disabilities and/or difficulties in VET.

English et al. (2017) used a multiple-probe study design across skills to assess the effects of intervention on participants' ability to perform skills accurately. They examined the effectiveness of video modelling (VM) with video feedback (VFB) intervention to teach vocational gardening skills to three adults with autism spectrum disorder (ASD). Ortoleva and Bétrancourt (2016) used a computer-supported instructional activity to identify patterns of interactions, and specifically, peer-feedback that engages students in productive collaboration on critical incidents in health care. Nguyen (2018) used a case study design and adopted a combined peer-teacher feedback model on Thai Students' Writing Accuracy. Dekker Groen (2015) used a quasi-experimental pre-post-test design and videotaped feedback dialogues to investigate teachers' questions and responses, students' reactions, and the effects of the training programme.

Table 2 is a tabulation of important data extracted from the included studies.

Table 2: Characterisation of selected studies—relevant data from studies included in the review

Authors, Publication year, Country	Study design	Group size and the average age	Feedback method	Study context	Type of learning difficulties	Feedback outcomes
Dekker-Groen et al., 2015. Netherlands	A quasi-experimental pre-post-test design	N=23 (20 years) Trained group=16 Male=4 Female=12 Control group=7	Feedback dialogues between students and teachers	Nursing skills	Self-reflection to regulate learning and development	Improved students' ability to elaborate and reflect—students developed competencies for reflection to self-regulate their career development.
English et al., 2017. Australia	Multiple-probe design	N=3 (23 years) Male=2	Video modelling with video feedback intervention	Gardening skills	Autism spectrum disorder	Students learned and acquired standard gardening skills. Feedback model was efficient and socially acceptable interventions.
Ortoleva and Bétrancourt, 2016. Switzerland	Design-based research approach	N=21 (22 years) Male=4 Female=17	Peer feedback through productive collaboration	Health and social care assistance	Collaborative writing difficulties	Exhibited enhanced capacity to elaborate on peers' experiences and benefit from peers' comments, but did not spontaneously articulate knowledge acquired in different contexts
Nguyen, (2018). Thailand	Case study	N=48	Combined peer-teacher feedback	Academic writing in the English language	English writing difficulties	Reduced errors and improved writing skills over the course of several written tasks.

5. Themes and Patterns from Studies

Table 3: Insights from the selected papers

Theme	Dekker-Green et al., 2015	English et al., 2017	Nguyen, 2018	Ortoleva & Betrancourt, 2016	Total
Feedback method					
Feedback dialogues	*				1
Productive collaboration				*	1
Combined peer-teacher feedback			*		1
Video modelling with video feedback intervention		*			
Source of feedback					
Teachers	*	*			2
Peers				*	1
Teachers and Peers			*		1
Transformability of feedback					
Teachers trained in feedback	*				1
Combined students' and teachers' familiarity with feedback guidelines		*	*		2
Students' familiarity with feedback guidelines				*	1
Impact of feedback					
Improved students' self-reflection ability.	*				1
Improved students' attitude in work situations.				*	1
Reduced errors in writing.			*		1
Learned gardening skills.		*			1

The following four main themes emerged from the reviewed articles: (1) *Feedback methods*, (2) *Source of feedback*, (3) *Transformability of feedback*, and (4) *Impact of feedback*. *Feedback methods* describe how the feedback was given to the students under study. *Source of feedback* deals with who provided feedback to the students in the selected articles. *Transformability of feedback* explains what made the feedback transformative to the students who received feedback in the context of the articles. *Impact of feedback* explains how feedback influenced the students' performance in the selected articles.

All four studies captured different feedback methods, including feedback dialogues, collaborative writing, combined peer-teacher feedback, and video modelling with video feedback intervention. They were used for students in health and social care studies, English language studies, and gardening studies. Dekker-Green et al. (2015) and English et al. (2017) examine teacher feedback, Ortoleva and Betrancourt (2016) examine peer feedback, while Nguyen (2018) examines combined peer-teacher feedback.

In all instances, both students and teachers were either familiar with or gained familiarity with the standard assessment guides used for the feedback process. The feedback outcomes were different as illustrated in Table 3. One study enabled students'

self-reflection ability, another study enabled students to improve their attitude in work situations, a third study enabled students to reduce errors in their writing, and a fourth enhanced students' practical gardening skills.

5.1 Feedback Methods

In the feedback dialogues between teachers and students in a nursing programme, teachers posed questions to students and gave response prompts to stimulate the students' reflection skills development (Dekker-Greon et al., 2015). This model prompts deep reasoning questions and responses, potentially stimulating students to elaborate and reflect on their learning. The feedback dialogue in the teacher training programme consisted of an iterative process involving three meetings of 90 minutes, where trainees got information and instructions about the function of questioning, general and specific questions, question categories, and how they related to feedback and reflection. In addition, video fragments of representative feedback dialogues between teachers and students were used as a training tool for the trainees to have discussions with their colleagues and to exchange experiences. Then they were allowed independent practice time of new behaviour after each meeting in interaction with students. Then, in three individual meetings of 45 minutes each, recorded video interaction of feedback dialogue with the student was analysed to give trainees insight into their actions and guide them to reflect on experiences and to formulate new goals, which was followed by another period of independent practice.

Productive collaboration/collaborative writing about workplace-critical incidents is examined in Ortoleva and Betrancourt (2016) as a measure to provide nursing students with the solid conceptual and substantial practical knowledge and experience expected to be acquired in both school and workplace contexts. The aim was to identify patterns of interactions, specifically, the type of peer-feedback that engages students in productive collaboration. Students received feedback on a collaborative digital platform designed for assessments. In designated workspaces on the platform, students were asked to describe critical incidents they had encountered in their workplace practice in relation to specific topics for feedback. Once this was done, students were allowed access to their colleagues' workspaces to provide them with comments and suggestions on their situations, so feedback was received amongst peers.

A combined peer-teacher feedback method was used by Nguyen (2018) to help Thai university students improve their English writing accuracy in a 14-week paragraph writing class (which met once weekly for 150 minutes in each of its 14 weeks). It involved consistent remedial grammar lessons paired with the provision of feedback on students' commonly made mistakes with follow-up activities—mini-lessons that built their knowledge over the course of the semester. This is in line with Ferris' (2002) study, which asserts that this approach is effective in building students' accuracy levels in language study. The students were first trained to provide comprehensive coded feedback on their friends' writing using specified guidelines and error codes for common errors that were documented in the literature. Three peers and the writer checked the first drafts while

the teacher checked the second and third drafts using the same guidelines and symbols at home. This process allows for learners to self-edit their writings as they engage in more profound forms of language processing, resulting in more long-term growth in accuracy.

Teachers used a tally sheet developed from guidelines and codes to record error frequencies by type in each draft and assignment (three drafts for each writing) to develop appropriate remedial lessons for each writing task. The lessons were taught in 45-minute follow-up activities which aimed to assist the students with their errors at the beginning of each class during the experiment period (weeks 6-14). Then, peers' comments and writers' revisions were graded with a deduction of 1% from their summative score for each irresponsible comment and each instance of ignoring the provided feedback. Overall, the grading process, based on teachers' regular reviews of students' writing, frequent remedial mini-grammar lessons with explanations, clarifications, and negotiations with the teacher and the teacher's feedback following peers' feedback, helped the students to progressively update and consolidate their English knowledge and improved their English-language writing skills (Nguyen, 2018). Video modelling with video feedback and video prompting with video feedback is examined as feedback methods by English et al. (2017). The method is used in teaching gardening skills to three young adults with ASD including social anxiety, Asperger's syndrome, selective mutism, and epilepsy. The purpose was to improve prospects and enable meaningful employment to adults with ASD through training programmes that offered work experience, knowledge of work culture, and generalisable job skills such as weeding, harvesting, planting, quality control, hoeing, bed marking, and labelling.

The feedback method involved two intervention packages – one combined video modelling with video feedback and one combined video prompting with video feedback. First, the participants' performances were filmed. Then, the researcher and participant reviewed footage of the participant's performance, with the researcher providing praise for correct skill step performance and corrective feedback for incorrect skill step performance (just once) while participants were encouraged to ask questions or seek further clarifications. The intervention cycle for participants consisted of two feedback loops in each session, followed by extended trials with video promptings to enable them to master the skill set in all steps. Given the possibility of corrective feedback being potentially aversive and damaging to the video feedback process, researchers were quite sensitive with their engagement approach. Regarding filming for the first skill sets, they only provided feedback in the form of praise, for instance, on correct skill step performance until they established a rapport with the participants.

5.2 Transformability of Feedback

Evidence from the review studies shows that familiarity with providing and receiving feedback directly correlates with feedback's impact on students. This means that feedback will not have a transformative effect on students if the provider is not familiar with the principles and guidelines of the feedback method. For example, instructors in the English et al. study (2018) showed dexterity in their handling of the video modelling

with video feedback intervention process with ASD students. They succeeded in filming video modelling instructional videos with three exemplars of completing gardening skill steps. With them as a base, they produced video prompting instructional videos that showed one instance of a single step of the task. Then, audio narrations were recorded separately and layered into each video and the narration snippets were spaced throughout the video to coincide with the visual depiction of the skill step so that there was one instance of first-person narration for each skill step across the three exemplars. The instructional video recordings and recorded video prompts increased participants' familiarity with the assessment criteria and enhanced their skills. Intervention continued across all skill sets for all participants until they reached criterion of at least 80% correct performance for at least three consecutive trials; a performance level deemed adequate by the lead horticulturalist.

In the combined peer-teacher feedback method in Nguyen et al., (2018), both teachers and students demonstrated knowledge and familiarity with providing and receiving feedback. The English division of the university provided curriculum innovation to support students' writing abilities, followed by training organised in two major phases. The first phase was a 14-week paragraph writing course in which students were taught basic components of an academic paragraph in the first five weeks. At the beginning of each class from week 6 to week 14, they received 45-minute follow-up training activities aimed at assisting them with their errors. With this, they gained the ability to provide comprehensive coded feedback on their peers' writing using specific guidelines and error codes. These skills were tested for peer feedback for the rest of the training period, which amounted to seven complete paragraphs of 150 words each for seven topics. Guidelines and codes were used to develop a tally sheet, which was used to record error frequencies by type in each draft and assignment (three drafts for each piece of writing). This explains just how prepared students and teachers were in the combined peer-teacher feedback, which increased Thai students' writing accuracy.

With feedback dialogue, teachers in the study of Dekker-Groen et al., (2015) were trained on how to give feedback and were familiar with the processes of giving and receiving feedback. They were purposefully selected based on a set of criteria, which included interest in developing their own competence, availability for training, a minimum workload of 20 hours per week (teaching and guiding students), and not being close to retirement. The average age of teachers in the training group was 51 years old, with 13 years of teaching experience, while that of those in the control group was 47 years old, with 16 years of teaching experience. This characterisation depicts their level of familiarity with giving and receiving feedback, which justifies the level of reliability and validity of the study results.

In using collaborative writing as a feedback method demonstrated in the study of Ortoleva and Betrancourt (2016), nursing students were trained to give feedback to their peers based on the need for them to acquire the required capacity to handle relationships with patients (key competence) in the second year of the nursing programme. The feedback exercise was on critical incidents they faced in their workplaces. This referred

to situations that were particularly difficult for (or important to) the students and made them reflect on their practice. Three guiding questions in accordance with techniques of critical incidents were provided to enable the students to write about the situations and become more familiar with the collaborative writing (feedback) requirements.

The students were equally trained to use assessment guidelines and to give feedback to peers using the same guidelines. During the exercise, prompts were provided to guide the peer-feedback progress. Due to their training and familiarity with collective writing guidelines and processes in their entirety, the students were able to assess their peers' work in relation to the expected required standards in the feedback guidelines. These circumstances suggest that both teachers and students had adequate knowledge and/or familiarised themselves with the collaborative writing feedback processes prior to their full engagement.

5.3 Outcomes of Feedback Methods

Overall, the feedback methods in the review studies produced commendable outcomes. In Nguyen (2018), for example, the combined peer-teacher feedback model helped students improve their English writing accuracy amidst difficult circumstances – large class sizes, students' low level of English proficiency, inexperience in groupwork, and their culturally embedded "passive" learning styles (Root, 2016). The students experienced a steady and remarkable reduction in errors over the course of seven writing tasks. The frequency of their corrections being erroneous (by percentage) went down steadily from 4.2% to 1.7% in Week 1 and Week 7, respectively. However, cognisance is made of the fact that there is no corrective feedback recipe for all settings as it is imperative to adjust the type of feedback offered to learners to suit their existing knowledge of the target language and learning styles in specific institutional, classroom, and task contexts (Ellis, 2009).

In general, the students gained skills that enabled them to employ all revision strategies in their error corrections and because of the precise rules to follow, they were able to fix their errors without any difficulty. However, due to the difficulty level of each error, there were differences in how they each managed to reduce the errors. Furthermore, even though their self-revisions for errors were usually accurate, they preferred consulting their teachers, whom they trusted for more reliable knowledge.

In the case of productive collaboration in the study of Ortoleva & Betrancourt (2016), the outcome of the feedback method indicated four patterns concerning the level of elaboration of students' interaction. These included minimal, partial, sufficient, and advanced elaboration categories. Analysis of students' skills was assessed by the level of elaboration in each category and in relation to provided prompts, including suggestions, personal experiences, etc. Quantitatively, each peer-comment provided by all 21 students was classified into one of the categories, with each student having two independent peer-comments attributed to one of the four categories. Consequently, a total of 42 peer-comments were distributed as follows: 7 comments were attributed to the minimal group, 9 to the partial group, 12 to the sufficient group and 14 to the advanced group. In

all, the study judged that the quality of the comments did not depend so much on the student's individual attitude towards the task or its capacity but varied depending on the context.

Those classified in the minimal elaboration category were students whose interactions provided feedback with incomplete or missing elements. The feedback either contained only comprehension questions or did not contain a real explanation or justification. In the partial elaboration category was feedback that presented more elements, including an interesting suggestion, but offered no chance for reusing the proposed idea in a constructive manner. Feedback in the sufficient category was more complete, with various elements (if not all the prompted ones) included and explained, providing the peer with the option to reuse some ideas. In the advanced elaboration category was feedback that was more complete. Students exploited all the prompts provided, asked peers thought-provoking questions, and included detailed suggestions by drawing on personal experiences and justifying their comments. This suggests that the outcome of productive collaboration varied among students.

The overall assessment is that productive collaboration would enhance some students' ability to interact and respond to thought-provoking questions depending on prevailing circumstances, including feedback processes, timing, and the operational environment.

An assessment of feedback dialogue by Dekker-Groen et al. (2015) determined that teachers' prompts and reasoning questions could be very effective in evoking students' reflection to self-regulate their learning and development. The study which investigated teachers' questions and responses and students' reactions revealed that, compared to the control group, the trained group, on average, used more hybrid prompts, deep reasoning questions, and prompt responses, which potentially stimulated students to elaborate and reflect. In the trained group, students gained verbal dominance as the average number of words teachers used per turn decreased. The study also revealed that instead of long elaboration, active listening and caring for wait time are more important for supporting students' reflections.

The outcome of video modelling with video feedback and video prompting with video feedback varied for students with ASD across three skill steps completed for gardening, which included weeding, harvesting, and planting (English et al., 2017). The process evolved through five separate phases—baseline, intervention, intervention fading, generalisation, and follow-up phases, with the following outcome: One student showed remarkable progress from the first to the fourth intervention in their learning and feedback process, with a near-perfect performance by the seventh intervention session, which earned him an average score of 80% in a range of 78-100%. However, with simultaneous fading of intervention across the three skill sets, the same student experienced a small performance decrement for weeding (phase mean 91%, range 88–96%), with 100% of steps completed in all fading sessions for both harvesting and planting.

In all cases, the interventions with video prompting and video feedback proved to be socially significant and enhanced participants' ability to accomplish their work tasks.

5. Discussion

This review study identified the following four feedback methods used among students with learning difficulties/disabilities in VET institutions: (1) Videotaped feedback dialogues between students and teachers, (2) Video modelling with a video feedback intervention, (3) Combined peer-teacher feedback, (4) Peer feedback through collaborative writing activities. Even though the outcomes of these feedback methods align with those of other studies, they have challenges (Lipnevich & Panadero, 2021). It is important that they are understood contextually to appropriately inform their incorporation into curricula towards better outcomes. In accordance with Branch and Paranjape (2002) and Chin (2006), for example, Dekker-Groen et al. (2015) assert that feedback dialogue is an important tool to enable students to develop competencies for reflection to self-regulate their development, which takes place in three phases: forethought, performance, and reflection (Zimmerman, 2002). Accordingly, Branch and Paranjape (2002) maintain that teachers can pose questions as follow-up on clues they notice in students' thoughts or feelings to enable students' reflection to regulate their learning and development. Overall, the assumption is that feedback dialogues can potentially engage students and elicit self-feedback that can support their reflection skills when teachers use more question categories and prompts in sequences (Davis, 2003; Ifenthaler, 2012). This is consistent with the contention that students rely on their memory (e.g., recall of information) to respond to short-answer questions if prompted in feedback dialogue (Chin, 2006). A shift in verbal dominance from teachers to students because of a decrease in recall questions indicates effectiveness in feedback dialogue (Dekker-Groen et al., 2015)

Notwithstanding, more research is needed to determine the effectiveness of feedback dialogue across different contexts, such as in different cultural backgrounds and subject disciplines. It is also important to address the potential challenges associated with implementing this approach such as class size and resources required to train teachers in the use of question categories and prompts. Even though Dekker-Groen et al. (2015) suggest that teachers' active listening and caring for wait time are important components for supporting students' reflections compared to long elaboration, the latter strategy remains a good technique for enhancing information to clarifying or specifying the relation between learners' prior knowledge and their learning experience (Hamilton, 2012).

Regarding video modelling with video feedback intervention, a combination of video-based instructions and face-to-face feedback enabled students with ASD in Australia to learn standard gardening skills while responding to different feedback variations (English et al., 2017). This proved to be transformative under favourable teaching and learning conditions for VET students with learning difficulties as it

improved their performance in work-based learning. Correspondingly, other studies contend that self-prompting video may be beneficial in supporting independence in the workplace (Burckley et al., 2015; Seaman & Cannella-Malone, 2016; Anderson et al., 2017). However, this must happen with teachers' guidance, which creates room for students' adaptive development and increases their capacity to benefit from naturally occurring social support within the workplace. As such, context-based video modelling with video feedback methods would improve work-based learning capacities of students with varied learning challenges. Therefore, there is a need to consistently explore feedback methods in other contexts for evidence-based best practices that have the potential to improve student learning.

Though video-based instructions demonstrate a high effectiveness rate for skills development in adults with ASD, enabling them to work more independently, it has its limitations. If such training is not done in collaboration with potential employers, it leaves a gap in terms of employers' knowledge of their candidates' potential support needs. For instance, if an employer chooses to hire such candidates regardless of their disability with or without detailed diagnostic information, they would be challenged by how to take on interventions to keep them adequately productive within each task.

Besides, teacher guidance in video modelling with video feedback intervention is indispensable in relation to students' networking, interaction, and cooperation abilities, which have become critical assessment areas for VET students and teachers. For example, teachers must be able to leverage multiple sources of information about their students in their work environments to assess their social participation. With effective guidance, the multiple probe design used for ASD students in English et al. (2017) can improve the learning abilities and skills of students with other forms of disabilities in work-based instruction. Suppose such students are video-recorded in their workplaces. In that case, teachers will rely on the recordings for assessments to guide and provide transformative feedback to support the students' learning or work life.

About combined peer-teacher feedback, Nguyen's (2018) study proves that it developed students' English skills in writing paragraphs. The students experienced a steady and remarkable reduction in errors over the course of seven writing sessions with consistent peer and teacher interventions, consistent with the findings of a previous study by Ferris (2002) and Nguyen (2017). Ferris (2002) contends that a consistent provision of feedback determines the effectiveness of combined peer-teacher feedback and mini-lessons meant to build students' knowledge over the course of time. This is because learners whose errors are frequently corrected are engaged in a more profound form of language processing when they self-edit their writing, which results in more long-term growth in accuracy. Similarly, Nguyen's (2018) study proved that students' writing skills improved because of regular follow-up activities by themselves and with their teachers, through consistent remedial grammar lessons.

It is important to note that the feedback method succeeded against the backdrop of a large class of Thai students with a low level of English proficiency, inexperience in groupwork, and a culturally embedded "passive" learning style (Root, 2016). Besides the

teachers' expertise, the success is mainly attributed to the dedication and support from the institution's English division, and the students' preparedness. This aligns with the contention that the supportive environment from the school and community are critical to the success of any innovative pedagogy (Hyland & Wong, 2013). Therefore, teachers' subject knowledge is irrelevant without supportive and stimulating conditions, which are necessary to foster real change in practice (Burns et al., 2016; Lee et al., 2016).

In productive collaboration, Ortoleva and Bétrancourt (2016) note that even though a majority of the students produced comments with a sufficient or advanced level of elaboration to describe their situations and provide comments to their peers, some did not spontaneously articulate the knowledge acquired about critical incidents in the workplace in different contexts. This was despite the guidance provided for the feedback tasks, and the high level of participation. This suggests that the impact of peer-commenting is beneficial to the extent of the participant's ability to provide and receive comments (Tseng and Tsai, 2007)). Besides, some learners will always have reservations about peer assessment, considering their peers' level of qualification compared to that of teachers (Kaufmann & Schunn, 2010).

Peer trust and objectivity relate to the capacity to consider peers' perspectives in one's own reasoning. It is known as transitivity, a critical determinant of productive interactions for knowledge constructions (Teasley, 1997; Weinberger & Fischer, 2006). However, the impact on performance is higher when feedback is more constructive, including justifying the comments and observations provided (Gielen et al., 2010; Narciss & Huth, 2006). Additionally, continuous follow-up and proper assessment of students' mastery of instructional recommendations will enable participants' knowledge of productive interaction toward collaborative knowledge construction. This suggests teachers' capacity to provide and justify criteria for defining and evaluating helpful and objective peer-feedback in different studies and scenarios, and to formulate instructional recommendations (Gielen et al., 2010). For example, a coding scheme can be developed to assess the level of elaboration of the peers' questions and comments regarding relevant external perspectives on one's situation (Gielen, 2010).

6. Conclusions

This study has highlighted the paucity of research on the outcome of feedback among students with difficulties/disabilities in VET institutions. It agrees that effective feedback can help students understand their strengths and weaknesses, set improvement goals, and progress towards achieving them (Hattie & Timperley, 2007). However, it recommends that it be mainly tailored to students' individual needs. To justify feedback outcomes, the study suggests the importance of corresponding research on how students with learning difficulties experience different feedback methods. This will enable measures to facilitate an effective transition from school to employment for students with learning disabilities and/or difficulties in learning in VET.

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Conflict of Interest Statement

No potential conflict of interest by the authors.

About the Author(s)

Evelyn Ansah Karkkulainen is a doctoral researcher and University teacher at the Faculty of Philosophy, Department of Special Education at the University of Eastern Finland. Evelyn currently works as an education advisor to FinCEED, the Finnish National Agency for Education on educational sector development cooperation. Her research interests include vocational education and training, inclusive education, special needs education, teacher training, student assessment and qualitative research methods. ORCID: <https://orcid.org/0000-0003-0100-4997>

Kaisa Pihlainen is an Assistant Professor (tenure track) at the Faculty of Philosophy, Department of Special Education at the University of Eastern Finland. Her research interests include inclusion, participation, and learning environments throughout the life courses and qualitative research methods, especially visual and participatory research methods. She has participated in many transdisciplinary research projects both nationally and internationally. She has a title of Docent in lifelong learning University of Lapland. ORCID: <https://orcid.org/0000-0001-9437-4481>

Eija Kärnä works as a professor of Special Education at the University of Eastern Finland. Professor Kärnä has been involved as a principal investigator in many multidisciplinary national and international development and research projects. Her research interests are inclusive learning environments, technology for individuals with special needs, autism spectrum, and digital literacy of various age groups. ORCID: <https://orcid.org/0000-0001-8107-3604>

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