

Video Demonstration Method and Vocational Skills Training for autism Spectrum Disorders-Analysis Based on the Research Literature of the Last Decade

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Abstract: In order to understand the intervention of the video demonstration method on the vocational skills of people with autism spectrum disorders, this article reviews and analyses the research on the use of the video demonstration method on the vocational skills of people with autism spectrum disorders in the past ten years from seven aspects: research design, research subjects, use of the video demonstration method, intervention methods, intervention contexts, intervention goals and intervention effects. Therefore, this paper proposes recommendations for the application of the video demonstration method in the vocational skills of people with autism spectrum disorders, with a view to providing reference for researchers in this field.

1. Introduction

For people with Autistic Spectrum Disorder (ASD), employment is an important life transition and community integration opportunity. [1] The key to transitioning from school to society is employment, but deficits in social skills present barriers to integration and to obtaining and maintaining employment. Video Modelling (VM) is an evidence-based practice for learners with autism and has been well documented for its effectiveness across a range of skills, including play skills, social skills, language and communication skills [2]. Seaman and Cannella-Malone found that 62% of employment settings for adults with autism used video modelling interventions. [3] There is currently a preponderance of overseas research on the use of video modelling in the vocational skills of people with autism spectrum disorders, and although there has been an increase in interest in this area in China, there is still a paucity of research. In this paper, we plan to review and analyse the research on the use of video demonstrations in vocational skills for people with autism spectrum disorders over the last decade and make some suggestions and perspectives.

2. Research Methodology

In order to better understand the effectiveness of the video demonstration method in the vocational skills of autistic patients, this paper searched and combed through the empirical studies of the video demonstration method in the vocational skills of autistic patients in China and abroad between 2013 and 2022. The literature searched was mainly from databases such as EBSCO, ERIC, Web of Science and CNKI. The search keywords are: "Video Modeling", "VM", "Autism spectrum

disorder ", "Autism", "Job skill", "Vocational skill". An initial screening was conducted by reading the keywords, abstracts and research methods of the literature obtained from the search, followed by further screening of the resulting studies according to the following specific inclusion criteria: (1) they were empirical research literature; (2) the studies included or focused on the use of video demonstrations; (3) the intervention objectives focused on vocational skills; (4) the full text was retrievable; and (5) there were clear research findings. After screening based on these specific criteria, a total of 30 papers were finally selected, including 26 papers in English and 4 papers in Chinese.

3. Study Results

Summary information covered in the 30 papers can be found in Table 1.

3.1 Study Design

All 30 studies included in this paper used an experimental approach, with the single-subject experimental design being the most used, with 28 studies (approximately 93%). This is because all 28 studies used small samples of individuals and participants with autism, which is inherently heterogeneous, and the single-subject experimental design allows for the effects of intervention strategies and environmental variables on individual-level performance to be addressed, allows for flexibility in modifying independent variables in the study when subjects do not perform as expected, and does not compromise the integrity of the experimental design, making it a good choice for researchers in developing and implementing evidence-based practice dealing with small or heterogeneous populations[4] . Therefore, a single subject is certainly an appropriate research design in this direction of research. The most used single-subject experimental design was the multiple baseline design, with 23 items. The experimental results of this design are replicated across conditions and are useful for collecting relevant data and achieving functional analysis of variables related to the target skills.

3.2 Study Subjects

In terms of subject demographic characteristics, there were 118 individuals with autism in 30 studies, excluding 20 patients from researcher Rosen [5] et al. and 22 patients from researcher Strickland[6] et al. who were not informed of their gender, of the remaining 76 individuals with autism, 64 were male and 12 were female, with a male to female ratio of nearly 5 to 1. It can be seen that the participants were not evenly split between males and females, but the exact reasons remain to be explored in depth. In terms of age, the participants ranged from 11-28 years old and were unevenly distributed. According to the developmental psychology age division, this age group belongs to the adolescent and late adult stages of a person's development, while autism spectrum disorders are lifelong disorders that require lifelong employment support, so there is a lack of exploration of the effects of vocational skills interventions for people with autism in middle age and their late adulthood. In terms of the level of impairment, more than half of the participants had not only autism but also other impairments such as intellectual disability, Down's syndrome, learning disabilities, attention deficit disorder, bipolar disorder and obsessive-compulsive disorder, leaving the participants in the study at an uneven level of ability and lacking research on people with autism at all levels of development.

3.3 The use of Video Demonstrations

Depending on the model, i.e. the demonstrator, this paper classifies four types of video modelling methods, namely Basic Video Modelling (BVM), Video-self Modelling (VSM), Point-of-view Video Modelling (POVM) and Video Prompting (VP) [7]. And the video demonstration method can be used not only as a stand-alone teaching practice but also in combination with other evidence-based practices such as self-management, social skills training or social narratives. [8]

In terms of the type of video demonstration method chosen, video prompts were the most used in the study, with 16 items, as most of the vocational skills to be taught to children with autism are complex chain skills and the complex task breakdown of video prompts makes them a good intervention for teaching students to complete multi-step tasks or skills independently. However, none of the 30 papers searched addressed self-video modelling. Self-video modelling has long been used to teach functional academic skills to students with autism in the classroom. For example, Burton et al.[9] used self-video modelling to successfully develop functional mathematics skills in four children with autism, and Schmidt et al.[10] used self-video modelling to successfully develop task behaviour in two children with autism in the classroom. Therefore self-video modelling can be an effective method of delivering educational content to students with disabilities. In terms of the use of video demonstrations, the analysis of the literature revealed that Rosen, Strickland, Van Laarhoven[11], and Burke[12] were among the four studies that used commercial video demonstrations, while the remaining 16 studies used video demonstrations in which the researchers themselves or their research assistants made the models. In terms of playback tools, almost all of the studies that chose the basic and perspective video demonstrations chose to use a laptop or desktop computer because their mode of playback was to watch the entire video in a closed, undisturbed room and then practice and reproduce the skills seen in the subsequent practical training. In terms of playback software, apart from the built-in programs that come with the playback devices, inPromptu was the more used software as it is an application developed for the iPod Touch, iPhone and iPad for video prompting, a set of applications developed specifically for people with disabilities to enhance daily living skills through video learning. [13]In addition to this, commercial programs are also used.

3.4 Intervention Methods

Six of the 30 studies used stand-alone video demonstrations and 24 studies used two or more other intervention strategies in combination with them, the most common of which were prompting and error correction, and all of which produced positive results. Analysis of the literature showed that the use of video demonstrations, either independently or in combination with other intervention strategies, had a positive impact on participants' completion of the target skills. However, when used in combination with other interventions and strategies, additional influences need to be taken into account, for example, researchers such as English[14] have suggested establishing rapport first, given the potential for error correction to be aversive and affect the final outcome of the intervention, but this is not an easily accessible strategy in 'real world' work. Strategies that are not readily available in 'real world' work are unlikely to have a substantial impact on the lives of people with autism, so the choice of intervention strategy needs to be determined.

3.5 Intervention Contexts

Overall, the statistics of the study contexts presented a diversity of intervention scenarios. The flexibility of the video-modelling method was further demonstrated by the positive results shown

across participants in terms of completing the target skills. For example, in Kim [15] et al.'s study of the effect of video modelling on the behavioural performance of adolescents with autism in relation to vegetable gardening, the cross-situational generalisation shown by the change in the context in which participants' outcomes were maintained from the rehabilitation service centre in their area to the balcony of their home reinforces the effectiveness of the video modelling approach. However, comparative studies of the same or similar skills in different intervention scenarios are still lacking in the 30 studies. Specifically, this controlled intervention scenario within schools accounts for approximately 43%. Thus, researchers such as Cullen [16] and Kellems [17] suggest that more research on the use of video demonstrations should be conducted in integrated employment settings; Cannella-Malone and Seaman et al. [18] argue that natural workplaces can better generalise research findings to real employment settings. However, one of the reasons why natural workplaces accounted for only about 30% of the 30 studies may be that there are more uncontrollable factors in natural work scenarios that are time-consuming and even difficult to complete the entire intervention.

3.6 Intervention Contexts

All 30 interventions in the literature targeted occupational skills. Interventions for vocational skills generally fall into three main categories: pre-employment skills, work skills and skills needed for post-employment retention [19]. Pre-job skills generally include the ability to ask questions, talk to people and interview skills; job skills emphasise practical skills, i.e. hands-on skills; and skills needed for post-job retention refer to soft skills in the workplace, such as time management skills, the ability to work together and organisational skills. Of the 30 studies searched for in this paper, two studies targeted pre-employment skills as an intervention, accounting for only about 7%, and 28 studies targeted workplace skills as an intervention, accounting for about 93%. However, there are no relevant studies that target post-job retention with the skills needed for intervention.

3.7 Intervention Effects

All of the 30 studies searched for in this paper gave clear findings and had a positive impact on participants' completion of the target skills, whether the video demonstration method was used independently or in combination with other intervention strategies. In terms of mastery of the target skills, all participants acquired the relevant vocational target skills and could use them independently, with the exception of Cannella-Malone [20] et al. in their 2015 study where participants had to rely on video performance to improve and Jennifer [21] et al. in their study where 2 people did not acquire the skills. In terms of maintenance and generalisation of intervention effects, 17 studies showed maintenance of the target skills acquired by participants at post-intervention follow-up, 6 studies showed generalisation of the acquired target skills, and 6 studies showed that participants were able to maintain the skills and generalise them to other scenarios. The six studies that had both maintenance and generalisation effects had minimal generalisation across study subjects, but all results were good.

4. Analysis and Discussion

4.1 Video Demonstration Method and Autism

The video modelling method was first proposed based on Albert Bandura's social learning theory which suggested that children learn new behaviours and skills by observing models that perform these behaviours, and modelling is the process by which an individual or model demonstrates

imitable behaviour. Bandura points out the importance of attention, memory, production and motivation for observational learning [22] and this is echoed in the process of the video modelling method. The reason why the video-modelling method is effective in learning skills for people with autism spectrum disorders is because of the correlation between the core characteristics of autism and the key elements of the video-modelling method, brief relevant information can be found in Table 2.

Table 2: Correlation between core characteristics of autism and key elements of the video model approach

Core features of autism	Key elements of the video demonstration method
Visual learners	Visual media
Highly motivated by technology	Technology-based
Has structured needs	Allows tasks to be broken down into multiple steps
Skill acquisition through repetition	Allows for replay in different conditions and environments
Attention to detail	Targeted skills can be highlighted
Deficits in social communication and social interaction, repetitive stereotypes in behaviour, interests or activities (DSM-5 diagnostic criteria)	Targets a range of skill deficits, including socialization, rigidity of thinking and sensory issues
Excellent memory and imitative language	Using skills learned through imitation
Prone to high levels of anxiety in social situations	to eliminate the stress and anxiety that may be experienced in real-life social situations

4.2 Video Demonstrations and Vocational Skills Training

On 15 March 2022, the China Disabled Persons' Federation (CDPF) and the Ministry of Human Resources and Social Security (MHRSS) and four other departments jointly issued the "14th Five-Year Plan for Enhancing the Vocational Skills of Persons with Disabilities"[23], which aims to enhance the vocational skills of persons with disabilities and help them to achieve "quality" and "quantity". "This highlights the importance of vocational skills training for people with disabilities. This highlights the importance of vocational skills training for people with disabilities. As an effective intervention for vocational skills training, there is also a correlation between video demonstration and vocational skills training.

The first is the consistency and repetition of the presentation of vocational skills. The training of vocational skills requires constant repetition and a high level of accuracy in the final mastery of the skill. The video demonstration method controls the video demonstration process by setting up the script and editing the video in advance, allowing the target skills to be presented in a standardised way, and the same or similar training scenarios in the intervention are more conducive to the student building the target skills. Secondly, vocational skills training requires precision in detail. Any vocational skill is specialist and contains key skills, and the flexibility of the video demonstration method allows the viewer to zoom in on key aspects of the skill and watch the execution of the required target skill. Finally, there is the independent use of vocational skills. The ultimate goal of vocational skills training for learners is to be able to perform the skill independently. The video demonstration method is a technology-assisted intervention based on the principles of Applied Behaviour Analysis. After the student has largely mastered the skill, the video demonstration method allows for the slow elimination of the video presence to facilitate independence in maintaining the required target skill and automating the vocational skill.

4.3 Vocational Skills Development Focus

Pre-employment skills generally include the ability to ask questions, talk to people and interview skills; work skills emphasise operational skills, i.e. practical hands-on skills; and skills needed for post-employment retention refer to soft skills in the workplace, such as time management skills, the ability to work together and organisational skills. The focus of the video demonstration approach to vocational skills training for people with autism is on work skills. One reason is that work skills are directly related to what autistic people need to be able to do in the future, and are key and core skills. Secondly, the video demonstration method has advantages in terms of demonstrating work skills. People with autism have difficulty concentrating and grasping difficult work skills. The different types of video demonstrations can show overall skills or partial skills that correspond well to the job skills and help people with autism to grasp the key points of skill acquisition.

4.4 Intervention Settings and Intervention Methods

As the above analysis shows, there are diverse and uncontrollable factors that can affect the effectiveness in uncontrollable natural contexts, and it is difficult to generalise skills training conducted in well-designed experimental settings to natural settings. For example, Puyunhuan[24] et al. suggest the use of video demonstrations to teach car washing or related skills to adolescents with autism in a practical work setting to improve adaptation and training effectiveness. In addition, other related strategies may influence the outcome of the intervention. For example, in their study of making vegetable salads and sandwiches, 김정일 [25] et al. used viewpoint video demonstrations combined with error correction procedures and did not separate the two for a comparative study, then the error correction procedures may have acted as facilitators and may have improved participants' performance in the learning environment, affecting the effectiveness of the final skill training.

5. Summary and Recommendations

From an analysis of the literature and research, it is easy to see that there are many advantages to the video demonstration method as an intervention strategy. Firstly, it increases the likelihood of successful acquisition of the target skills, secondly, it can increase students' motivation to learn, and thirdly, it gains independence. This theoretical knowledge and empirical research on effectiveness is of great interest and value to our country in this area, and we can build on this to further expand our research in order to provide more support for the autistic community in integrated employment settings.

5.1 Strengthening the 'people-Centred' Approach and Expanding the Research Audience

In terms of intervention strategies, it is important to consider the needs and future vocational environment of the person with autism when choosing which type of video demonstration method to use. In the development of target skills, it is important to base the training programme on the pre-existing abilities, potential and preferred vocational skills of different people with autism, as engaging in their preferred activities may improve task correctness and mastery of task behaviour. In terms of the selection of research subjects, firstly we can continue to use the video-modelling method as an intervention for different types of groups, for example Değirmenci[26] mentioned in a review study that most studies have been conducted with people with autism spectrum disorders and that there are fewer studies on other disorder types; secondly, future researchers can expand the sample size in order to improve the intervention effectiveness of the video-modelling method in the

autism group Secondly, future researchers could expand the sample size to increase the external validity of the effects of video-modelling interventions in the autism population; and finally, future research could expand the study of women with autism to understand the relevance of video-modelling interventions to gender.

5.2 Embedded in an Integrated Working Environment with Natural Support

Through current research contexts occur in artificial or school-based employment settings, personnel in the school setting may provide highly personalised support to students, but these supports are not always present in competitive integrated employment settings. Leslie [27] has suggested that other individuals, such as colleagues, could be enabled to watch videos with employees with autism in real employment settings as a natural work support and enhance productivity. So future research could be extended to integrated work environments, where working with other employees in the work environment would undoubtedly also promote social inclusion of autism, and would also be of great help in future employment in real-life settings.

5.3 Improve Relevant Skills Support and Explore Different Careers

Due to the social deficits and repetitive patterns of behaviour, interests or activities of people with autism, many employers may stereotype single-person jobs or repetitive tasks as the most appropriate positions for people with autism, and interventions have focused primarily on improving general job skills applicable to the employment setting, with only a few video-modelling method studies focusing on employment-related skills for people with autism. For example, in the study by Rausa [28] et al. the video demonstration method was used to enable a 23-year-old person with autism to acquire telephone skills, such as improving listening and responding to commands and complaints. It is therefore important that researchers and their employers, for example, try to avoid underestimating the possible employment outcomes of people with autism because of their stereotypes. Future research should focus not only on job skills, but also more research on pre-employment skills and post-employment retention skills.

5.4 Expanding the use of Tools and Equipment and Developing Related Technologies

The first step in the use of video demonstrations can be the creation of a database. As technology advances, the production and use of video demonstrations is a more viable option for those who work directly with adults with autism in the workplace, employers or trainers may choose to create a database of relevant videos to support more employees with autism in a relatively quick and cost effective manner. Secondly, teachers can use video demonstrations in the classroom to address the goals already identified in the student's IEP (Individual Education Plan) [29] . However, care should be taken in its use to provide pre-intervention training if the technology involved is new, and to minimise the distraction of the video context. In terms of the development of video demonstrations, the "cloud space", which is already available, is an area that can be developed and explored in depth, based on which devices can be separated from the video and stored in the "cloud space" for access by various mobile devices, and which can be accessed by several devices together.

5.5 Drawing on Foreign Research Designs to Improve Local Experiments

First, consider the challenges of maintaining experimental control in an integrated work environment. This is because in natural integrated employment settings, there is an increase in uncontrollable factors such as the suitability of the environment for measuring baselines and the

researcher's employer identification, each of which may affect the outcome of the intervention. [30]Therefore future research conducted in this country will need to maintain experimental control and researchers will need to be more rigorous and flexible in order to ensure the integrity and validity of the experiment. Secondly, long-term maintenance data was found to be limited through the study, and future studies in China could attempt to collect maintenance probe data over a longer period of time to provide more evidence of experimental validity. Finally, future experimental designs could be expanded and extended to compare the effectiveness between different types of video demonstration methods, and to explore what kinds of intervention strategies can have better intervention effects when combined with video demonstration methods.

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Appendix

Table 1: Basic information on the literature related to the video demonstration method, 2013-2022

Researchers	Participants	Experimental design	Type of video	Playback equipment	Playback software	Research contexts	Target skills	Intervention results
Foreign language literature section								
Alice (2020)	1 ASD (16 years old, female)	A-B design	BVM	iPad	Built-in programs	Inside the classroom	Sandwich making	Participants' sandwich-making skills continue to improve
Aljehany (2020)	3 ASD (12 years 9 months - 15 years, 1 boy and 2 girls)	alternate treatment design, randomised control design	VP	iPad 2	Built-in programs	School classrooms	Photocopying, label making, faxing	VP intervention more effective for two participants, minimal to maximal cues more effective for one participant
Bross (2020)	5 ASD (18-26 years old, 4 males and 1 female)	Cross-behavioural multi-baseline design	BVM	MacBook Air computers	Built-in programs	In their respective jobs	Be able to say greetings, service words and closing phrases related to the community employment environment	All participants have improved customer service skills and most customer service skills have been maintained
Burke (2013)	4 ASD (19-28 years old, 4 males)	Cross-subject cross-task multi-probe design	VP	Samsung Galaxy Tab Tablet	VideoTote application	Manufacturing and transport warehouses	Packing and transporting goods	Significantly improved performance on complex transport tasks for all participants with error correction procedures
Cannella-Malone	1 ASD (16 years old,	Cross-task multi-detection	VP	iPod Touch 3, iMainGo2	Built-in programs	Home economics	Washing tables, windows and plates	With the error correction process, participants rely on

(2015)	1 female)	design		auxiliary speaker		classrooms, corridors		the video performance to get better and the video is irrevocable
Cannella-Malone (2017)	1 ASD (28 years old, male)	A-B design	VP	iPod Touch 3	inPromptu	Researchers' offices, photocopying rooms	Packing envelopes, photocopying	Participants acquired target skills
Cannella-Malone (2018)	2 ASD (18-20 years old, 1 male and 1 female)	Cross-subject cross-task multi-probe design	VP	iPod Touch 3	Built-in programs	School home economics room or designated study room	Making lemonade, folding long-sleeved T-shirts, washing dishes in the dishwasher	Improvement in skills for all participants
Cullen (2017)	1 ASD (22 years old, male)	Cross-task multi-detection design	VP	iPad	MyPicsTalk	A local pet shop	Organising shelves for boxes and bags, bottles of fish food, large items on shelves	Accuracy has been improved
Delisio (2020)	1 ASD (16 years old, male)	A-B design	VP	iPad	Built-in programs	Kitchen in the subject's home	Peeling and chopping various vegetables	Targeted skills were acquired through VP.
English (2017)	3 ASD (18-23 years old, 3 males)	Cross-task multi-detection design	POVM, VP	iPad 4, iPod	Built-in programs	Social enterprise flower and herb nurseries	Weeding, picking, planting, quality control, hoeing, riverbed marking and labelling.	In combination with VFB, two participants improved their skills. A third participant needed VP to successfully gain skills.
Gardner (2019)	4 ASD (14-19 years old, 2 males and 2 females)	Cross-subject multi-probe design	VP	iPad	Built-in programs	Autism Support Classroom	Washing dishes	All participants improved their dishwashing performance to meet accuracy standards.

Jennifer (2013)	7 ASD (15 years 1 month - 18 years 7 months, 6 males and 1 female)	Cross-subject multi-probe design	POVM	ipad2	Built-in programs	Room in the schoolroom	Mail Categories	With the error correction process, five gained the target skill and two did not.
Johnson (2013)	1 ASD (17 years old, male)	Cross-behavioural multi-detection design	VP	iPod Touch	Picture Scheduler	Special education functional classrooms	Preparing and cooking food	Skills have improved
Kellems (2018)	2 ASD (19-20 years old, 1 male and 1 female)	Cross-behavioural multi-detection design	VP	iPad 2	Keynote	Community Living Apartments	Making pasta, macaroni and cheese, cleaning the dining room, front porch, back porch, the living room, sending mail	The accuracy of all participants in completing the target task immediately improved significantly.
Kim J (2017)	3 ASD (13 years 7 months - 14 years 2 months, 3 males)	Cross-subject multi-probe design	POVM	Samsung Portable Mini Notebook	Built-in programs	Vegetable gardens at rehabilitation service centres in your area	Weeding and watering	The results showed that all participants demonstrated behavioural improvements in both target behaviours during the initial phase of the intervention. When the intervention was completed and rolled out in daily life, the improved behaviours were maintained

Kim S (2020)	3 ASD (13-17 years old, 3 males)	Cross-subject cross-task multi-probe design	VP	iPad Pro	Camera	Participant's home kitchen	Cooking food	Participants show an accelerating trend in the correctness of cooking steps for recipes
Lee GT (2020)	3 ASD (16-19 years old, 3 males)	Cross-task multi-detection design	BVM	Computer (no brand model indicated)	Built-in programs	Car Wash	Car Wash Skills	Effectively improved the performance of car wash skills in an employment setting for three participants. Potential immediate improvement in listening and responding to orders; more gradual improvement was also observed in participant expertise.
Rausa (2016)	1 ASD (23 years old, male)	Cross-behavioural multi-baseline design	BVM	MacBook Pro computers	QuickTime Media Player	Large commercial flower and plant farms	Answering customer calls	
Rosen (2017)	20 ASD (16-21 years old)	Randomised controlled design	BVM	Desktop computers	Ready, Set, Work!	Virtual library scenarios created by desktop computers	Interviews, talking to people	More effective for the autism spectrum disorder group, boosted target skills
Seaman (2018)	3 ASD (13-15 years, 3 males)	Cross-subject multi-probe design	VP	iPhone 5s	inPromptu	Mail Room in the Secondary School Building	Photocopying	Accuracy of photocopying skills improved for all participants
Seaman-Tullis (2019)	1 ASD (14 years old, male)	Cross-behavioural multi-baseline design	VP	iPhone 5s	inPromptu	Mixed classrooms across categories in schools	Organise documents and place them in envelopes	Accompanied by an error correction process, participants can complete their tasks accurately

Stauch (2020)	2 ASD (average age 16, 2 males)	Cross-behavioural multi-detection design	BVM	iPad2	Built-in programs	Satellite offices in medical institutions	Clean table surfaces, replenish kiosk supplies and operate cash registers	Vocational skills of both autistic people improved with the error correction process
Strickland (2013)	22 ASD (16-19 years old)	Randomised control group design	VM	Home computers	JobTIPS interview process	Virtual Office Environment	Interviews	Through virtual reality, visual support and theory of mind guidance, the experimental group will improve significantly
Van (2018)	4 ASD (15-18 years old, 2 males and 2 females)	Cross-behavioural multi-baseline design	VP	iPad or HP Slates	Go Talk Now app and PowerPoint	School teachers' meeting room	Cleaning of the school meeting room	Three of the four participants had an immediate and significant increase in independent responses
김정일 (2016)	3 ASD (14 years 1 month - 14 years 8 months, 3 males)	Cross-subject multi-probe design	BVM	Samsung Portable Mini Notebook	Built-in programs	After-school rehabilitation centres in your area	Soap making, Korean traditional music performance	All participants showed improvements in on-task behaviours and reductions in off-task behaviours at some stage of the implementation of the intervention
김정일 (2017)	3 ASD (15 years 9 months - 16 years 7 months, 3 males)	Cross-subject multi-probe design	POVM	Samsung Portable Mini Notebook	Built-in programs	Rehabilitation service centres in the region	Making vegetable salads and sandwiches	Along with the error correction process, all participants mastered cooking skills during the intervention and the improved outcomes were maintained after the intervention was completed

Chinese Literature section

Hwang Sin (2019)	3 ASD (15-20 years old, 3 males)	Cross-subject multi-probe experimental design	BVM	Desktop computers	Built-in programs	University Occupational Bakery	Cupcake	All participants had improved skills and all had good immediate, sustained results.
Pohun Huan (2018)	4 ASD (16-25 years old, 4 males)	Cross-behavioural multi-probe experimental design	BVM	Desktop computers	Built-in programs	Classroom and car wash	Car Wash Skills	In combination with the picture prompts, all participants improved their skills and all had good immediate, maintenance and generalisation success.
Zhang Wanfeng (2021)	3 ASD (11-15 years old, 3 males)	Single-subject alternate treatment experimental design	BVM	iPad 2017 model tablet	Built-in programs	Intervention room	Hand Ground Coffee	In combination with the picture cues, participants showed a significant increase in the correctness of their hand-ground coffee working skills
Zhu Hongling (2021)	4 ASD (16-19 years old, 4 males)	A-B design + cross-behavioural multi-probe experimental design	VP	iPad	Built-in programs	School housekeeping and guest room	Skills in "Western table setting", "Sesame seed cake making", "Toilet cleaning"	Along with the error correction process, participants have acquired three skills

Note: 1. VM (Video Modeling) = Video Demonstration, BVM (Basic Video Modeling) = Basic Video Modeling, POVM (Point-of-view Video Modeling) = Point-of-view Video Modeling, VP (Video Prompting) = Video Prompting, VFB (Video Feedback = Video Feedback, VR (Virtual Reality) = Virtual Reality; 2. The table presents only basic information about patients with ASD from the literature.