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Preliminary Findings of a Project-based Motivational Group Coaching Curriculum for Secondary School Students with Autism Spectrum Disorder (ASD)

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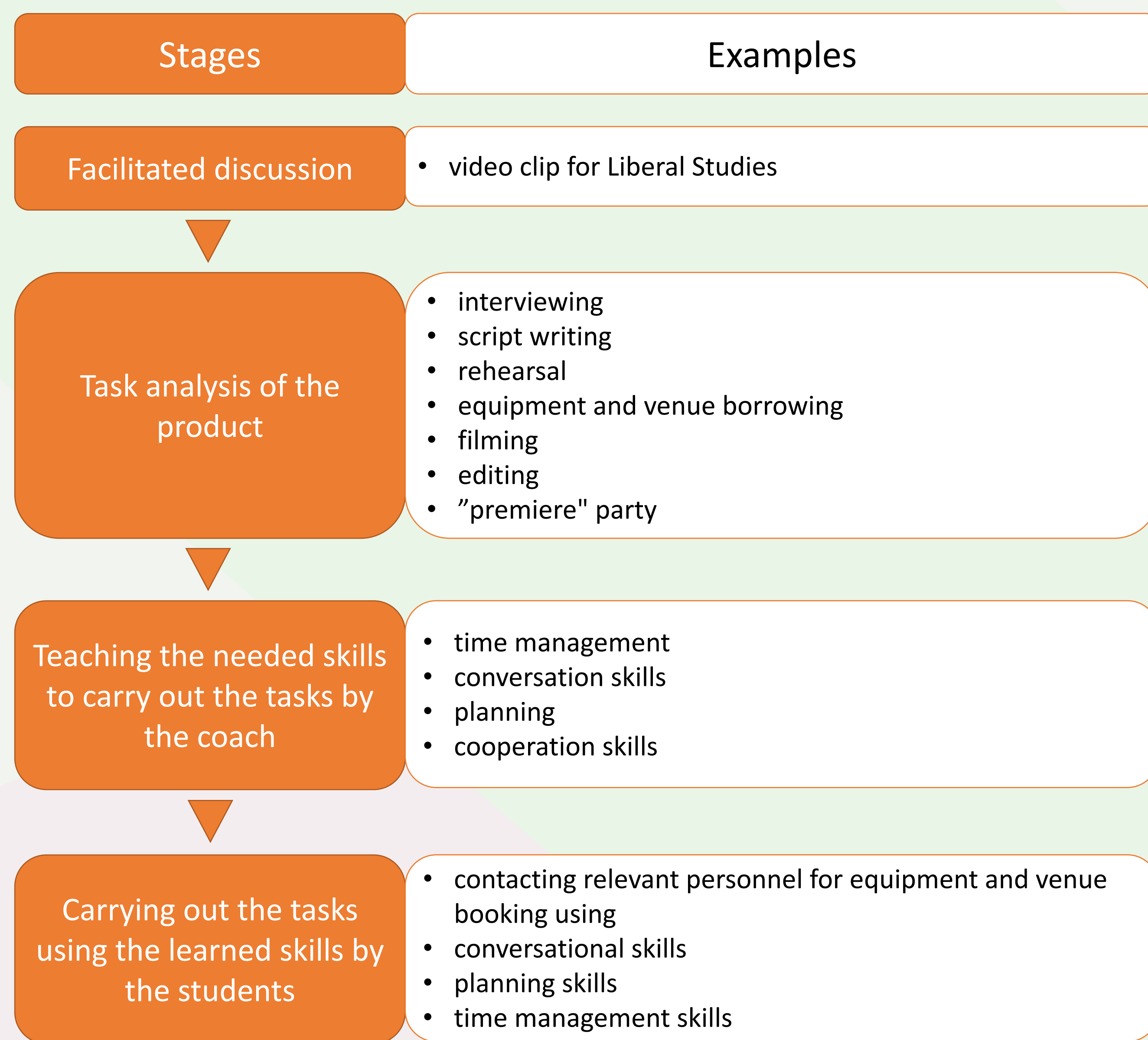Rehabilitation Service, Caritas Hong Kong

Introduction

Clinical observation demonstrated that secondary school students with Autism Spectrum Disorder (ASD) were less motivated to engage in group training when compared with their primary school counterparts, and hence a reduction in training effectiveness. Moreover, past research documented that students with ASD are less self-determined than students without special needs (Wehmeyer & Shogren, 2008). Furthermore, students whose psychological needs of autonomy, relatedness, and competence are met are more motivated to learn (Ryan & Deci, 2000). Existing body of the literature suggests that the promotion of self-determination in instructional settings is not only effective in educational outcome, but also deemed vital by teachers (Wehmeyer, Palmer, Shogren, Williams-Diehm, & Soukup, 2013).
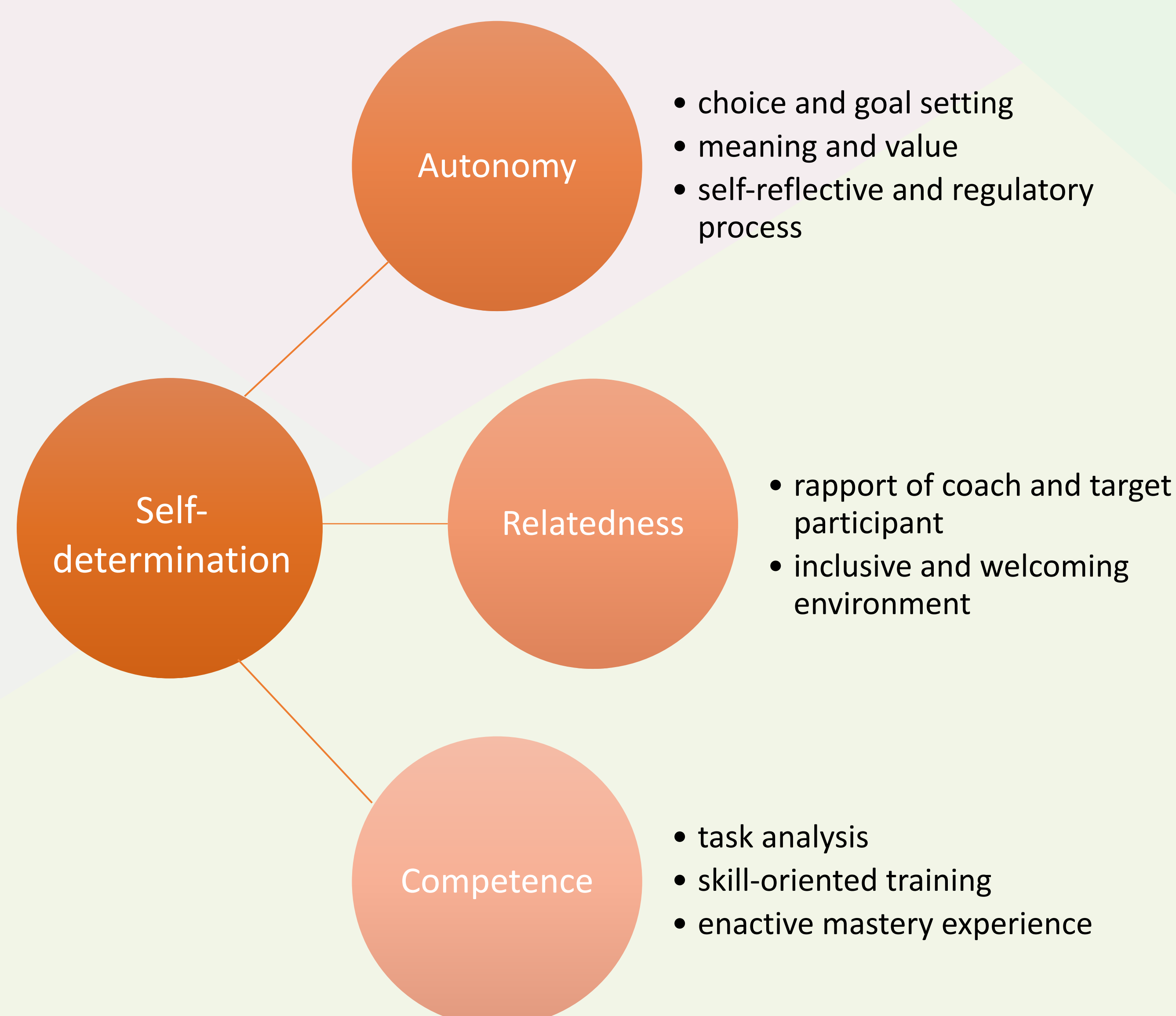
Aim

Prior studies have demonstrated the benefits of incorporating elements of self-determination theory into classrooms of adolescents with special needs, e.g., more independent living and more positive life satisfaction and quality of life (Shogren, Lopez, Wehmeyer, Little, & Pressgrove, 2006). To enhance the motivation of secondary school students with ASD to take part in group training so as to increase the training effectiveness in terms of social competence and executive skills, authentic, relevant, and interesting curricula were designed and implemented within the JC A-Connect: Jockey Club Autism Support Network program.

Stages in the Proposed Curriculum

Stages	Examples
Facilitated discussion	• video clip for Liberal Studies
Task analysis of the product	• interviewing • script writing • rehearsal • equipment and venue borrowing • filming • editing • "premiere" party
Teaching the needed skills to carry out the tasks by the coach	• time management • conversation skills • planning • cooperation skills
Carrying out the tasks using the learned skills by the students	• contacting relevant personnel for equipment and venue booking using • conversational skills • planning skills • time management skills

Self-determination in the Proposed Curriculum

Autonomy
• choice and goal setting
• meaning and value
• self-reflective and regulatory process

Self-determination

Relatedness
• rapport of coach and target participant
• inclusive and welcoming environment

Competence
• task analysis
• skill-oriented training
• enactive mastery experience

Methodology

Within-subject measures design was adopted to evaluate the effectiveness of the proposed curriculum. The 58-item Learning, Social, and Emotional Adaptation Questionnaire – Short Form for Secondary Students (LSEAQ-SF) was used to tap students' classroom, social, and emotional adaptations. The 65-item Social Responsiveness Scale – 2nd Edition for School-age Students (SRS-2) was used to measure students' social competence (Constantino, 2012). Moreover, the 86-item Behavior Rating Inventory of Executive Function (BRIEF) was used to measure executive functioning skills of students (Gioia, Isquith, Guy, & Kenworthy, 2013). School personnel filled out LSEAQ-SF on a four-point Likert scale, while parents completed SRS-2 on a four-point Likert scale and BRIEF on a three-point Likert scale respectively at two time points – before and after students attending the coaching group. Nevertheless, data of BRIEF was currently unavailable, and was thus not being analyzed at the time being.

Furthermore, apart from students receiving group coaching using the proposed project-based motivational curriculum, students receiving the traditional curriculum filled out a post-intervention evaluation questionnaire on a six-point Likert scale regarding the implementation of the group coaching. This includes four statements of students' perception, e.g., favorability of the group activities, recognition of group activities as interesting, further usage of the skills learned, and potential future participation in comparable coaching group.

Results and Discussion

A total of 54 secondary students with ASD received group coaching using the proposed project-based motivational curriculum. Within-subject t-tests were used to evaluate the effectiveness.

Training Effectiveness in Students' Adaptations

After the intervention, students receiving group coaching using the proposed project-based motivational curriculum showed trends of improvements in the following adaptations.

• ↑ social adaptation
• ↑ emotional adaptation
• ↑ thinking and learning skills
• ↑ problem-solving and self-efficacy
• ↑ leisure activity
• ↑ managing conflict and bullying
• ↑ emotional expression and comprehension

Improvements in these domains did not reach the statistical significance threshold. This might be attributed to the small sample size.

Training Effectiveness in Students' Social Competence

After the intervention, students receiving group coaching using the proposed project-based motivational curriculum showed statistically significant improvements in all social responsiveness domains, as shown in the figure below. Lower scores suggest less severe deficits.

	Awr	Cog	Com	Mot	RRB	SCI	SRS
Sig	**	**	†	**	†	**	*
Effect	L	L	L	M	S	L	L
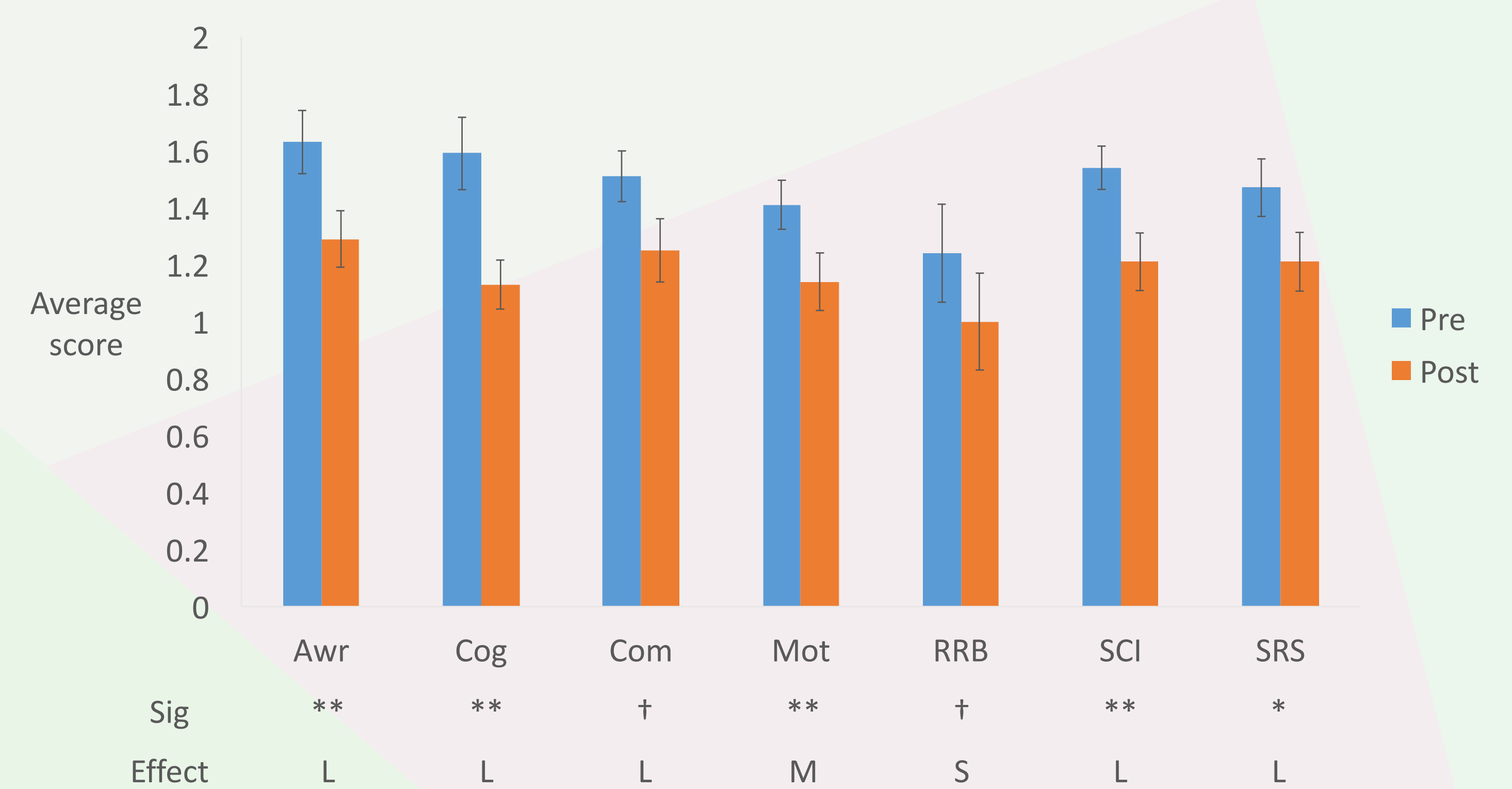
Note. Awr = Social awareness. Cog = Social cognition. Com = Social communication. Mot = Social motivation. RRB = Restricted interests and repetitive behavior. SCI = Social communication and interaction. SRS = SRS-2 total. Pre = Pre-measure. Post = Post-measure. Standard errors of means are represented in the figure by the error bars attached to each column.
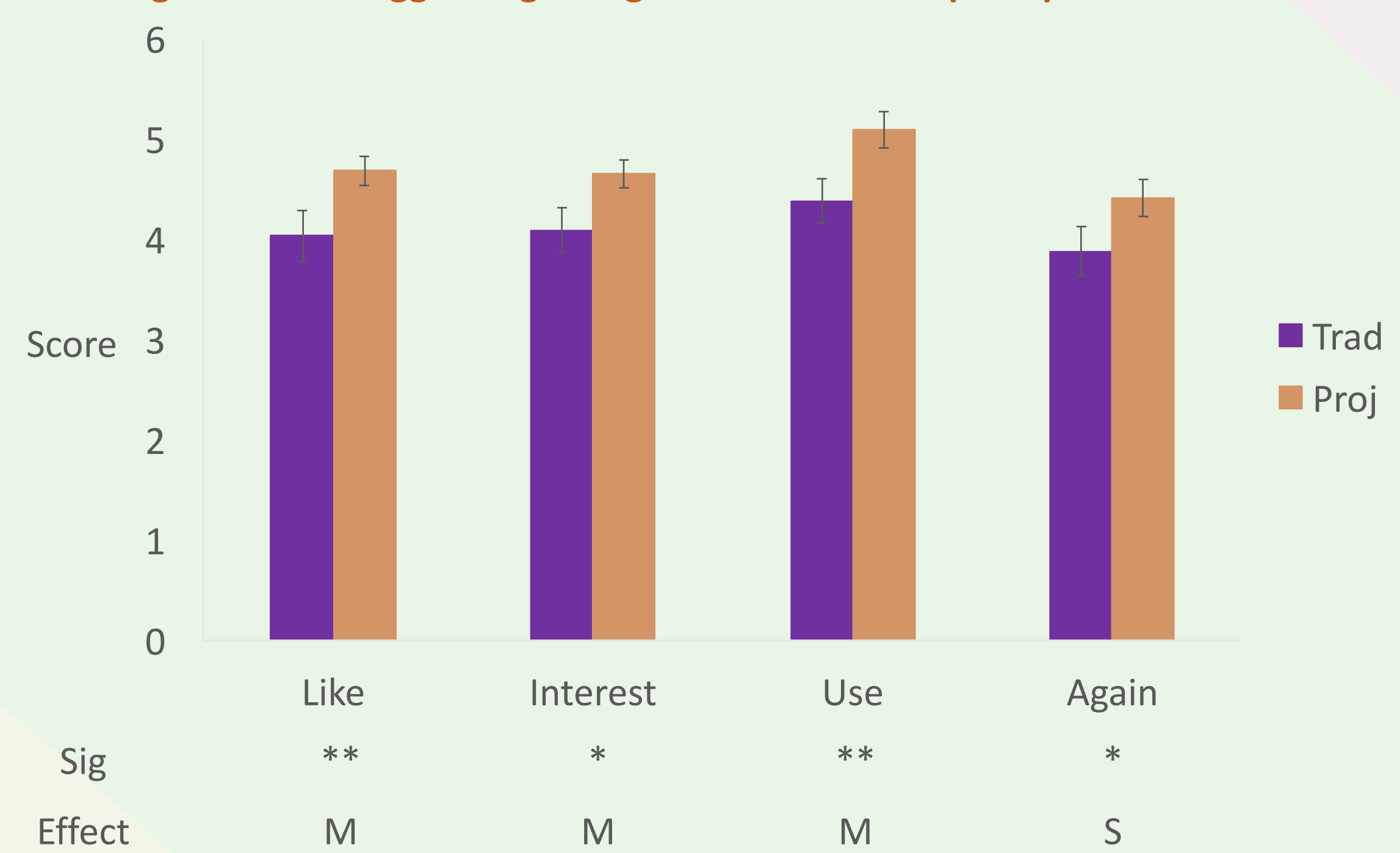Sig = Significance level, one-tailed. †$p < .1$. *$p < .05$. **$p < .01$.
Effect = Effect size (Cohen's d). S = Small ($d ≥ .2$). M = Medium ($d ≥ .5$). L = Large ($d ≥ .8$).

Students' Perception

Overall, results from the self-report questionnaire revealed that students receiving group coaching intervention using the motivational group coaching curriculum and traditional curriculum both expressed that they liked the group activities (Like), found the group activities interesting (Interesting), would apply the skills learned (Use), and would join similar groups in the future (Again).

Nonetheless, when comparing students from the motivational group coaching curriculum and traditional curriculum by using independent t-tests, those from the motivational group curriculum demonstrated statistically significantly higher scores in all perception statements, as shown in the figure below. Higher scores suggest higher agreement with the perception statements.

	Like	Interest	Use	Again
Sig	**	*	**	*
Effect	M	M	M	S

Note. Trad = Students receiving traditional curriculum training. Proj = Students receiving the project-based motivational curriculum training. Standard errors of means are represented in the figure by the error bars attached to each column.
Sig = Significance level, one-tailed. *$p < .05$. **$p < .01$.
Effect = Effect size (Cohen's d). S = Small ($d ≥ .2$). M = Medium ($d ≥ .5$).

Conclusion and Future Directions

The proposed project-based motivational group coaching curriculum is effective in improving learning, social, and emotional adaptations of students with ASD. It is also effective in improving students' social competence and reducing restrictive and repetitive behaviors. Students from the motivational group coaching curriculum were more likely to find their learning experience more enjoyable. They perceived higher level of transferring the strategies they learned into different settings. Further, they were more willing to take part in similar trainings in the future.

Research and intervention are still ongoing and are expected to complete by the third quarter of 2018. Future studies may investigate the effects of the motivational group coaching curriculum on enhancing students' executive functioning skills. Future studies might also include a control group and use battery of questionnaires to evaluate students' motivation.

References

Constantino, J. N. (2012). *Social Responsiveness Scale, Second Edition (SRS-2)*. Torrance, CA: WPS Publishing.
Gioia, G. A., Isquith, P. K., Guy, S. C., & Kenworthy, L. (2013). *Behavior Rating Inventory of Executive Function (BRIEF)*. Torrance, CA: WPS Publishing.
Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68-78. doi: 10.1037/0003-066x.55.1.68
Shogren, K. A., Lopez, S. J., Wehmeyer, M. L., Little, T. D., & Pressgrove, C. L. (2006). The role of positive psychology constructs in predicting life satisfaction in adolescents with and without cognitive disabilities: An exploratory study. *The Journal of Positive Psychology, 1*(1), 37-52. doi: 10.1080/17439760500373174
Wehmeyer, M. L., Palmer, S. B., Shogren, K., Williams-Diehm, K., & Soukup, J. H. (2013). Establishing a causal relationship between intervention to promote self-determination and enhanced student self-determination. *The Journal of Special Education, 46*(4), 195-210. doi: 10.1177/0022466910392377
Wehmeyer, M. L., & Shogren, K. (2008). Self-determination and learners with autism spectrum disorders. In R. Simpson & B. Myles (Eds.), *Educating children and youth with autism: Strategies for effective practice* (2nd Ed.) (pp. 433-476). Austin, TX: Pro-Ed Publishers, Inc.

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