INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES

Vol 15, Issue 7, (2025) E-ISSN: 2222-6990

Integrating Sports Climbing into College Curricula: Enhancing Student Performance and Well-being in Jiangxi, China

Fang Jian
City Graduate School, City University of Malaysia
Email: 289353220@qq.com

Dr. Hj Hamdan Bin Mohd Ali
City Graduate School, City University of Malaysia
Email: hamdanrunner@gmail.com

To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v15-i7/26020 DOI:10.6007/IJARBSS/v15-i7/26020

Published Date: 18 July 2025

Abstract

In recent years, sports climbing has emerged as a physically and mentally enriching activity with recognized educational benefits. However, there remains a lack of a structured and standardized sports climbing curriculum in colleges across Jiangxi, China. This study addresses the critical gap by investigating the relationships between awareness, perceived importance, satisfaction, and challenges associated with sports climbing, and how these factors influence student performance. Using a mixed-methods approach with a primary quantitative emphasis, data were collected from 200 students across Jiangxi colleges through a structured questionnaire. Pearson correlation analysis revealed statistically significant and strong relationships among all variables, particularly between satisfaction and student performance ($r = .778$), and between perceived importance and satisfaction ($r = .770$). The findings demonstrate that increased awareness and positive perceptions of sports climbing directly contribute to enhanced student satisfaction and improved academic outcomes, despite challenges faced in curriculum implementation. The literature review contextualizes these findings by exploring curriculum design, physical and mental development, safety protocols, and the role of cultural relevance and environmental ethics in program success. Discussions highlight the transformative role of sport climbing in promoting resilience, collaboration, reflective learning, and well-being among college students. The study concludes by emphasizing the need for institutional support, structured curriculum development, and inclusive policies to successfully integrate sport climbing as a core component of physical education. These insights provide a foundation for educational stakeholders to reform extracurricular programs and promote holistic student development through innovative physical education strategies. The study contributes to the evolving discourse on curriculum

innovation and reinforces the potential of sports climbing in shaping a well-rounded academic environment in Jiangxi's higher education landscape.

Keywords: Sports Climbing, Student Performance, Curriculum Development, Physical Education, Jiangxi Colleges

Introduction

There is currently no formal and standardized sports climbing curriculum available in colleges in Jiangxi, China. This absence poses a significant challenge in effectively integrating extracurricular activities like sports climbing into the educational framework. Extracurricular activities are recognized for their importance in enhancing students' motivation, learning, and overall development (Kosholap et al., 2021). However, the lack of a structured sports climbing curriculum limits these potential benefits. The existing extracurricular activity landscape in Jiangxi colleges fails to leverage sports climbing as a tool for improving students' learning capabilities and well-being. Without a well-defined sports climbing education program, students miss out on the comprehensive learning environment that such activities can provide. They are consequently deprived of the mental and physical well-being benefits associated with this specific extracurricular activity (Roberts, Newcombe & Davids, 2019). The lack of structure in the sports climbing curriculum prevents students from gaining valuable skills that could enhance their academic performance and personal development.

This study aims to address this gap by demonstrating the necessity and pivotal role of a comprehensive sports climbing curriculum in colleges across Jiangxi. The research will investigate how the implementation of a standardized sports climbing curriculum can create a supportive learning environment, promote student fitness, enhance mental robustness, and improve overall well-being. By systematically analyzing the current state of sports climbing programs and their impacts, the study seeks to provide evidence-based recommendations for developing and implementing an effective sports climbing curriculum. This will ultimately contribute to better educational outcomes and holistic development for students in Jiangxi, China. The primary problem this research will address is the lack of a structured sports climbing curriculum in Jiangxi colleges, which limits the potential benefits of extracurricular activities on student performance and well-being. The specific question for study are as follows:

- What are the relationships among awareness, perceived importance, satisfaction, and challenges, and their association with student performance in colleges in Jiangxi, China?

Conceptual Framework

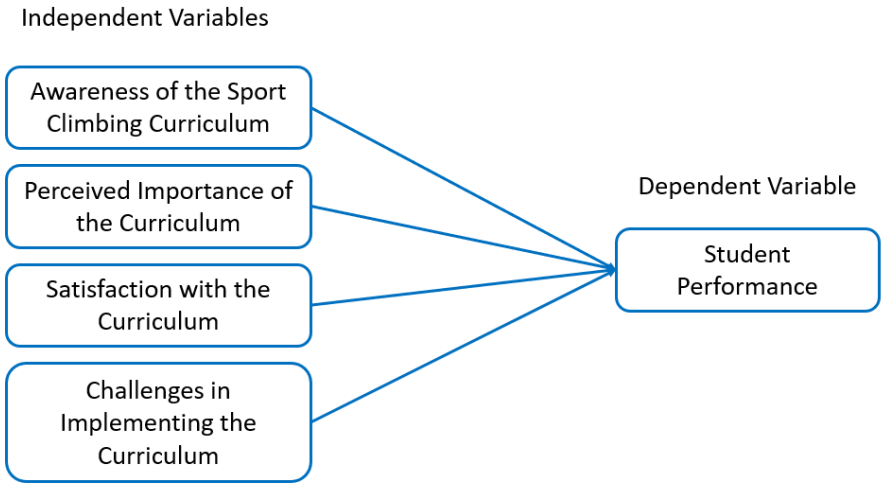

Figure 1: Conceptual Framework
Source: (Created by the researcher)

Literature Review

The idea of a sports climbing curriculum in colleges arises from an awareness of the sport's expanding appeal as a recreational and competitive activity on a global scale. Sports climbing involves employing specialized equipment to ascend man-made or organic rock structures, and it requires strong physical stamina as well as mental agility and problem-solving abilities. Sports climbing has grown in popularity among people of all ages, especially college students, due to its entertaining and difficult nature. Sports climbing is becoming increasingly popular among colleges in Jiangxi, China, as part of their physical education curriculum. The idea is to give them a memorable and fulfilling physical exercise that fosters physical fitness and important life qualities like perseverance, collaboration, and communication.

Yuan has delved into the landscape of curriculum design of sports climbing in higher institutions in Jiangxi, China. The curriculum focuses on physical education elective courses and aims to shed light on the complex process of creating varied and interesting curricula to meet students' various interests and requirements. Yuan has analyzed the elements that influence the decision to choose physical education optional courses by looking at how the curriculum is set up in Chinese colleges and universities (Yuan, et al., 2020).

Considerations including student preferences, societal trends, teaching strategies, and congruence with educational objectives may all be included in this inquiry. Tang has provided insightful information on effective curriculum design methods, illuminating how institutions manage the complex balancing act between encouraging physical fitness, encouraging a holistic learning experience, and taking into account students' specific preferences. Although the primary focus of the study is on physical education electives, its results may have indirect implications for the design and implementation of specialized curricula, such as sport climbing, within colleges and universities in Jiangxi, China (Tang, et al., 2020).

According to Wei, the curriculum's inclusion is a pillar that guarantees accessibility for students with all backgrounds and ability levels. For new climbers, the foundation for a secure environment is laid by fundamental ideas including safety protocols, basic knots, and harnessing techniques. It is important for students to develop proprioception and motor skills, inexperienced climbers graduate to learn fundamental climbing holds and methods as their confidence grows. Exploring subtle tactics helps intermediate climbers improve their ability to understand climbing routes and make thoughtful decisions. As pupils develop a greater grasp of balance and coordination, more difficult motions including dynamic movements and controlled shifts in body weight become the focus of instruction.

According to Kompan, in order to equip pupils with the skills necessary to overcome both physical and psychological problems, the curriculum allows time for mental conditioning exercises, problem-solving situations, and resilience-building activities. This recognizes the mental challenges inherent in sport climbing (Kompan, 2021). This methodical approach to skill development emphasizes how flexible the curriculum is, accommodating different learning pathways. The ultimate goal is to develop a generation of climbers with a broad skill set, ranging from simple techniques to complex strategies, and to grow not only skilled climbers but also self-assured problem solvers and well-rounded people. Strength, flexibility, and endurance are necessary for climbing. The curriculum includes exercises for focused physical training to raise pupils' levels of overall fitness and their ability to climb. The core physical skills necessary for climbing—strength, flexibility, and endurance—are heavily emphasized in the curriculum. Students perform focused workouts using an organized method to strengthen muscle groups specific to climbing, improve joint mobility, and increase cardiovascular endurance. Exercises for the upper body, core, and lower body that use resistance and body weight are essential for developing grip strength and stability (Kompán, Svidroňová, & Maslen, 2021). Exercises that increase flexibility let joints move more freely, which makes it easier to balance and navigate different grips. Students are prepared for extended climbing efforts through endurance conditioning, which is attained through cardiovascular exercises.

In the view of Rauch, safety comes first when climbing for sport. The emphasis of the program is on instructing students in fundamental safety procedures, including appropriate harnessing, knot-tying, and belaying skills. Students gain knowledge of risk management and the value of teamwork in maintaining a secure climbing environment. The development of collaboration dynamics, whereby students learn to rely on one another to provide a safe climbing environment, is a crucial component of this safety-centric strategy. In the end, the program develops competent climbers as well as a safety ethic that serves as a guiding principle both on and off the climbing wall (Rauch, et al., 2020). Safety goes hand in hand with the program's emphasis on teamwork and collaboration. Students participate in experiential learning, which fosters interpersonal trust and effective communication. Students who are adept at collaborative dynamics improve not only individual climbing experiences but also the group's dedication to safety. These abilities go beyond the climbing wall, enhancing how students connect with others in different settings.

According to Eastabrroks, students are taught climbing ethics through the curriculum, which promotes responsible and polite behaviour when using natural climbing settings. In relation to climbing activities, students learn about environmental preservation and

sustainability. The importance of acting with respect and consideration when climbing in natural surroundings is emphasized by this component. It fosters a sense of obligation to protect these environments for coming generations (Eastabrroks, 2022).Coolin has claimed that students have received knowledge about sustainability and environmental care. This creates a strong link between their climbing endeavours and the need to protect nature. Students are prepared to be conscientious climbers who give equal weight to the ethical ramifications of their journey and the vertical obstacles through an all-encompassing strategy (Collins, 2022).

Methodology

To investigate how universities in Jiangxi, China, have included sports climbing into their curricula, the research design for exploratory research was used because it best fits the goals and methods of the study. The research combines a primary quantitative strategy (an online questionnaire survey) with secondary qualitative information (articles and books). The study uses a positivist study ethic to investigate objectively analyze patterns and correlations within a set of data, using a sample size of 200 students obtained by simple random selection.

This methodology provides for a thorough investigation of students' views and choices on athletic climbing curricula by using SPSS for primary statistical analysis and thematic evaluation for the secondary information. Using a deductive methodology, researchers may more easily put their theoretically grounded ideas to the test. A pilot test with 30 participants is conducted to assess the validity and dependability of the questionnaire before collecting data on a larger scale.

In order to delve deeply into the still-emerging field of sports climbing curricula at Jiangxi's universities, an exploratory study approach was used. The research collects behavioural trends as well as significant cultural details by merging quantitative and qualitative data. The continual evolution of the architecture makes it possible to respond to new information as it becomes available (Osman et al., 2018). In sum, this layout guarantees a comprehensive investigation of the study issue and provides a basis for knowledgeable curriculum building and execution techniques.

Results

RQ: What are the relationships among awareness, perceived importance, satisfaction, and challenges, and their association with student performance in colleges in Jiangxi, China?

		Awareness	Perceived Importance	Satisfaction	Challenges	Student Performance
Awareness	Pearson Correlation	1	.766**	.752**	.692**	.726**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	200	200	200	200	200
Perceived Importance	Pearson Correlation	.766**	1	.770**	.721**	.767**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	200	200	200	200	200
Satisfaction	Pearson Correlation	.752**	.770**	1	.756**	.778**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	200	200	200	200	200
Challenges	Pearson Correlation	.692**	.721**	.756**	1	.756**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	200	200	200	200	200
Student Performance	Pearson Correlation	.726**	.767**	.778**	.756**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	200	200	200	200	200

****. Correlation is significant at the 0.01 level (2-tailed).**

The correlation matrix presented in the table illustrates the relationships among five key variables central to the evaluation of the sport climbing curriculum's effectiveness on student performance in colleges in Jiangxi, China. These variables include awareness of the curriculum, perceived importance, satisfaction, challenges, and student performance. All correlations are statistically significant at the 0.01 level, indicating strong and meaningful associations between the constructs measured.

The data reveal that awareness of the sport climbing curriculum is positively and significantly correlated with all other variables. The strongest relationship is between awareness and perceived importance (r = .766), suggesting that students and faculty who are more informed about the curriculum are also more likely to view it as an important part of the university's sports offerings. This indicates the vital role that information dissemination plays in shaping attitudes toward sport climbing. Additionally, awareness also correlates strongly with satisfaction (r = .752) and student performance (r = .726), emphasizing that increased knowledge and understanding of the curriculum are associated with more favorable experiences and perceived academic benefits.

Perceived importance shows even stronger correlations with the other variables. It is closely linked with satisfaction (r = .770) and student performance (r = .767), indicating that when individuals view the sport climbing curriculum as important, they are more likely to be satisfied with its implementation and to report positive effects on academic performance. This strong connection underscores the psychological and motivational influence that perceived value has on educational outcomes and user engagement.

Satisfaction with the curriculum emerges as the most consistently high correlate of student performance, with a Pearson correlation coefficient of .778. This suggests that when students are satisfied with the curriculum—be it in terms of instruction, resources, or experience—they are more likely to report improvements in their academic outcomes. Satisfaction also has a high correlation with perceived challenges (r = .756), which may indicate that even in the presence of logistical or administrative difficulties, high satisfaction can be maintained if the core elements of the program are strong. Alternatively, it might also suggest that individuals who are engaged enough to notice challenges are also the ones who value and derive satisfaction from the program.

The variable representing challenges is also significantly correlated with student performance (r = .756), a finding that may initially seem counterintuitive. However, this could suggest that facing and overcoming challenges within the curriculum—such as scheduling conflicts, resource limitations, or facility issues—may foster resilience, a stronger sense of involvement, or a greater appreciation for the program's benefits, which in turn supports academic performance. Challenges are also strongly correlated with awareness (r = .692) and perceived importance (r = .721), possibly indicating that those more engaged with the program are both more likely to perceive its significance and to encounter or recognize its limitations.

Finally, the consistently high correlation values between all variables and student performance reinforce the conclusion that the sport climbing curriculum has a meaningful impact on academic outcomes. Increased awareness, greater perceived importance, satisfaction, and even the presence of challenges all show strong positive associations with student performance. This suggests that the curriculum is not only valued and appreciated by its participants but also plays a significant role in enhancing their educational experience. As such, the findings highlight the importance of continued investment, effective communication, and responsive program design to maximize the curriculum's benefits in the academic context.

Discussion and Conclusion

Understanding how awareness, perceived importance, satisfaction, and challenges intersect to influence student performance offers critical insights into the broader educational landscape within colleges in Jiangxi, China. The interconnection between these variables shapes how students perceive and engage with the sport climbing curriculum, subsequently affecting their academic experiences. Awareness serves as the foundational entry point; without it, students are unlikely to engage deeply or value the curriculum. Yuan et al. (2020) emphasized that curricular effectiveness is often predicated on the visibility and communicative strategies used to inform students, which significantly influence their willingness to participate and their engagement levels in academic and physical programs alike.

Awareness is not simply about being informed; it also relates to how students internalize that information and whether it resonates with their educational and personal goals. When students in Jiangxi colleges understand the role of sport climbing in their holistic development, they begin to perceive the program as more than just a physical activity. According to Collins (2022), when students are aware of how an activity aligns with their aspirations and well-being, it enhances their investment in learning and performance. Awareness thus transitions into perceived importance, allowing students to establish meaningful connections with the curriculum that are vital for sustained participation and academic impact.

Perceived importance serves as a motivational filter through which students assess the relevance of a curriculum to their academic and life outcomes. When students in Jiangxi perceive sport climbing as contributing to their physical fitness, problem-solving skills, or resilience, they are more likely to approach it with seriousness and enthusiasm. Tang et al. (2020) suggest that curricula gain strength when designed around student interests and perceived utility, especially in elective or non-traditional subjects. This perceived importance not only drives engagement but also reinforces the credibility of the institution's educational strategies.

Once students believe in the importance of the sport climbing curriculum, their satisfaction becomes a significant predictor of continued involvement and performance improvement. Satisfaction emerges when expectations are met through well-structured content, skilled instruction, and reliable facilities. Rauch et al. (2020) noted that satisfaction in physical education is deeply connected to feelings of safety, achievement, and collaborative learning. When students feel that their needs are being addressed, they are more likely to invest greater effort, attend consistently, and apply the skills they learn to other academic and social domains.

The feedback loop between satisfaction and perceived importance is especially critical. When students find the curriculum rewarding, their valuation of it increases, which in turn strengthens their commitment and performance. Frühauf et al. (2023) recognized this dynamic, emphasizing that student-centered physical education programs generate higher satisfaction and lead to improved educational outcomes. The emotional gratification students receive from sport climbing, whether it be stress relief, social bonding, or a sense of accomplishment, contributes substantially to their academic and personal growth.

Awareness and satisfaction are mutually reinforcing but are also significantly influenced by the challenges encountered in curriculum implementation. Challenges can range from logistical issues like scheduling conflicts and lack of equipment, to more subjective ones such as fear of injury or low confidence. Ribeiro et al. (2021) discussed how perceived challenges could either deter engagement or, if managed well, build resilience and adaptability. For many students, the way challenges are framed and addressed determines whether they become barriers or catalysts for growth.

Institutions that successfully minimize or contextualize these challenges tend to foster environments where students feel supported, which positively influences satisfaction and academic performance. Kozina et al. (2020) advocate for a balanced curriculum that includes

both physical and psychological preparation, helping students approach challenges not as threats but as developmental opportunities. This perspective shifts the student mindset from avoidance to engagement, encouraging them to push their limits and apply the same persistence in academic settings.

Moreover, students who are aware of the curriculum and recognize its importance tend to view challenges as part of the learning curve rather than as deterrents. Arowosafe et al. (2022) noted that intrinsic motivation plays a crucial role in sustaining student effort despite difficulties. This implies that students with high awareness and a strong sense of purpose will likely perceive challenges as temporary or surmountable, maintaining their satisfaction and, by extension, their academic performance. The internal drive they cultivate through sport climbing often translates into better academic focus and time management.

As satisfaction grows and challenges are better managed, student performance is increasingly enhanced. Students who feel that their involvement in the sport climbing curriculum is both meaningful and rewarding often show improvements in concentration, emotional regulation, and social engagement—all of which are critical for academic success. Demirovic et al. (2019) highlight how overcoming physical challenges contributes to a student's sense of competence and accomplishment, which can spill over into academic domains, fostering a growth mindset that is essential for learning.

These interrelationships are often mediated by peer influence and institutional support structures. When students observe their peers engaging enthusiastically with the sport climbing curriculum, their own perceptions of its importance and effectiveness are reinforced. Frontini et al. (2019) emphasized that peer-led motivation and shared achievements amplify individual satisfaction and performance outcomes. Social dynamics thus play a role in sustaining the relationships among awareness, importance, satisfaction, and performance, providing an informal yet powerful support system.

Another important dimension is the integration of feedback and reflection mechanisms within the curriculum, which enhance satisfaction and help students navigate challenges. When students are encouraged to evaluate their own progress and articulate their learning experiences, they develop a deeper appreciation for the curriculum. Luo and He (2020) discuss how reflective practices contribute to student autonomy and self-efficacy, both of which are closely tied to academic performance. These reflective habits help students internalize the value of sport climbing, solidify their awareness, and elevate their learning outcomes.

Furthermore, supportive instructor-student relationships serve as a bridge between perceived importance and satisfaction. Effective instructors not only deliver technical knowledge but also foster a motivational climate that reduces the psychological impact of challenges. Williams et al. (2023) assert that instructor self-efficacy significantly affects student outcomes, especially when it comes to maintaining enthusiasm and managing diverse student needs. Skilled instructors help students recognize their progress, contextualize setbacks, and see the broader purpose of their efforts, all of which contribute to better performance.

When institutional policies align with the goals of the sport climbing curriculum, the relationship among all variables becomes more cohesive and impactful. Institutional backing in the form of funding, promotion, and inclusive policies ensures that awareness spreads and perceived importance is validated. Rubin and Lewis (2020) argue that institutional alignment with curriculum goals enhances credibility and student trust. When students see their college actively supporting the sport climbing program, it legitimizes their investment and strengthens their commitment to academic and extracurricular excellence.

Another vital relationship is the way emotional and physical safety interact with satisfaction and challenge perception. If students feel unsafe or unsupported, even minor obstacles may feel insurmountable. Conversely, when they perceive the environment as safe, they are more likely to take calculated risks and persevere through difficulties. Sanchez et al. (2019) highlight the role of safety in minimizing psychological barriers, allowing students to derive more satisfaction and perform better both in and out of the classroom. This underscores the importance of safety in reinforcing all the other variables.

The curriculum's ability to enhance wellness and reduce stress also contributes to higher satisfaction and improved academic focus. Sport climbing offers students a physical outlet that supports mental clarity and emotional balance, which are key to effective learning. Wilson et al. (2022) noted that such programs have far-reaching impacts on student well-being, which in turn affect their ability to perform academically. When students feel emotionally and physically well, their satisfaction with the curriculum rises, and their capacity to face academic challenges improves.

Environmental ethics and cultural relevance also affect perceived importance and awareness. Students in Jiangxi, where environmental stewardship is deeply valued, may find added meaning in a sport that promotes sustainability and respect for nature. Eastabrroks (2022) asserts that integrating cultural values into curricula enhances their relevance and fosters deeper engagement. This contextual awareness enriches the students' connection to the curriculum, increasing both satisfaction and performance.

The innovative use of technology within the sport climbing curriculum also strengthens the relationships among the studied variables. Augmented reality, motion analysis, and performance tracking tools not only enhance awareness and perceived importance but also improve satisfaction by providing tangible evidence of progress. Heo and Kim (2021) underscore the motivational power of such technologies in fostering better motor learning and decision-making. These innovations help students visualize their improvements and tackle challenges with greater precision, thereby reinforcing academic and physical growth.

References

Abbas, Y. (2020). *The socio-cultural practices of the Dorset rock climbing community towards the local environment* (Doctoral dissertation, Bournemouth University). http://eprints.bournemouth.ac.uk/34201/1/ABBAS%2C%20Yazan_M.Res_2019.pdf

Aithal, A., & Aithal, P. S. (2020). Development and validation of survey questionnaire & experimental data–a systematical review-based statistical approach. *International Journal of Management, Technology, and Social Sciences (IJMTS)*, *5*(2), 233-251.https://mpra.ub.uni-muenchen.de/104830/1/mpra_paper_104830.pdf

Akpan, E. C. (2022). Social Science Research and Philosophical Alignments. Social Science Research, 6(9), 93-99. https://www.researchgate.net/profile/Ekeabasi-Akpan/publication/371666223_Social_Science_Research_and_Philosophical_Alignments/links/648dea8eb9ed6874a5b59977/Social-Science-Research-and-Philosophical-Alignments.pdf

Al-Ababneh, M. M. (2020). Linking ontology, epistemology and research methodology. *Science & Philosophy*, *8*(1), 75-91.http://eiris.it/ojs/index.php/scienceandphilosophy/article/viewFile/500/732

Haroon, M. (2020). *School-based Sustainable Agriculture Curriculum Development* (Doctoral dissertation, California State University, Northridge). https://scholarworks.calstate.edu/downloads/z316q625t

Havenetidis, K., Bissas, A., Monastiriotis, N., Nicholson, G., Walker, J., Bampouras, T. M., & Dinsdale, A. J. (2022). Combining sport and conventional military training provides superior improvements in physical test performance. International Journal of Sports Science & Coaching, 17479541221116959. https://journals.sagepub.com/doi/pdf/10.1177/17479541221116959

Havenetidis, K., Bissas, A., Monastiriotis, N., Nicholson, G., Walker, J., Bampouras, T. M., & Dinsdale, A. J. (2023). Combining sport and conventional military training provides superior improvements in physical test performance. *International Journal of Sports Science & Coaching*, *18*(5), 1567-1576. https://journals.sagepub.com/doi/full/10.1177/17479541221116959

He, X., & Luo, J. M. (2020). Relationship among travel motivation, satisfaction and revisit intention of skiers: A case study on the tourists of urumqi silk road ski resort. *Administrative Sciences*, *10*(3), 56. https://www.mdpi.com/2076-3387/10/3/56/pdf

Heilmann, F. (2021). Executive functions and domain-specific cognitive skills in climbers. *Brain Sciences*, *11*(4), 449. https://www.mdpi.com/2076-3425/11/4/449/pdf

Heo, M. H., & Kim, D. (2021). Effect of augmented reality affordance on motor performance: In the sport climbing. *Human-Centric Computing And Information Sciences*, *11*. http://hcisj.com/data/file/article/2021103002/11-40.pdf

Heo, M. H., & Kim, D. (2021). Effect of augmented reality affordance on motor performance: In the sport climbing. *Human-Centric Computing And Information Sciences*, *11*. http://hcisj.com/data/file/article/2021103002/11-40.pdf?ckattempt=1

Hermawan, A., Setyaningsih, S., & Hardhienata, S. (2022). Modeling and of Strengthening Servant Leadership. *Edunity: Social and Educational Studies*, *1*(03). https://edunity.publikasikupublisher.com/index.php/Edunity/article/download/12/45

Hewitt, J. R., & McEvilly, N. (2022). 'I didn't realise the variety of people that are climbers': a sociological exploration of young women's propensities to engage in indoor rock climbing. *Leisure Studies*, *41*(4), 559-572. https://www.tandfonline.com/doi/pdf/10.1080/02614367.2021.2006280

Williams, M. K., Christensen, R., McElroy, D., & Rutledge, D. (2023). Teacher self-efficacy in technology integration as a critical component in designing technology-infused teacher preparation programs. *Contemporary Issues in Technology and Teacher Education*, *23*(1), 228-259. https://www.learntechlib.org/primary/p/221546/paper_221546.pdf

Wilson, O. W., Whatman, C., Walters, S., Keung, S., Enari, D., Rogers, A., ... & Richards, J. (2022). The value of sport: Wellbeing benefits of sport participation during adolescence. *International Journal of Environmental Research and Public Health*, *19*(14), 8579. https://www.mdpi.com/1660-4601/19/14/8579/pdf

Wintle, J. (2022). Physical education and physical activity promotion: lifestyle sports as meaningful experiences. *Education Sciences*, *12*(3), 181. https://www.mdpi.com/2227-7102/12/3/181