

Participant Observation and Research on Fitness “Daily Attendance” in the Context of Social Media

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Abstract. The "fitness fever" emerging in social media platforms has attracted a large number of users to participate in "daily attendance". Based on participant observation, questionnaire survey and other empirical research methods, this study observes the users who participate in fitness "daily attendance" and webcast influencers who organize fitness "daily attendance", so as to analyze their behavior characteristics in the context of social media. This paper finds that during the participation in fitness "daily attendance", webcast influencers actively interact with users and make efforts in agenda setting, participation motivation and communication content, thus clarifying the logic behind the fitness "daily attendance".

Keywords: Social Media; Fitness; Daily Attendance; Participant Observation.

1. Introduction

With the development of the economy and people's living standards, the demand for fitness is getting stronger. China attaches great importance to the national fitness for physical and mental health. According to the *Notice of the General Office of State Council on Issuing the National Fitness Program (2021-2025)*, "By 2025, the public service system for national fitness will be more perfect and the public will find it more convenient to engage in physical fitness. The fitness enthusiasm will be further improved and the number of participants in various sports will continue to increase, with the proportion of people who regularly participate in physical exercise reaching 38.5%". It has been observed that social media plays a significant role in stimulating national fitness. During mass sports participation, fitness enthusiasts are used to exposing sports track photos or sports achievements on social media such as Wechat Moment, Weibo and Xiaohongshu. Meanwhile, the number of users and overall usage duration of sports and fitness apps show a sustained and stable growth trend (Huang & Deng, 2017). In the context of social media, once this behavior of fitness sharing in social media is periodic, it will be regarded as fitness "daily attendance". At present, fitness "daily attendance" occurring in social media has become a group communication.

Nowadays, "daily attendance" in social media is a new and popular social and cultural phenomenon, which has unique digital age attributes in terms of communication behavior and content. According to different contents, it includes fitness "daily attendance", tourism visit and share, food checkpoint, reading "daily attendance" and so on. Taking the fitness "daily attendance" as the research object, this study pays attention to the fitness "daily attendance" on current social media and emphasizes the participant communication characteristics of digital media. Based on the classic theories such as "uses and gratification theory" and "symbolic interactionism theory", this paper analyzes the social relations behind fitness "daily attendance" and clarifies the interrelation and main influence of body, media, organization and society in the virtual world. From the perspective of sports communication research, fitness "daily attendance" can be regarded as a social communication behavior with social media as the main body. It is a common form of "information communication" and "self-presentation" in digital communities such as social media (Wang, 2023). This new way of sports participation stimulated and arisen by digital social interaction has brought diversified organization methods, communication space and potential to the mass fitness culture, injecting vigor into the traditional way of sports participation (Huang & Deng, 2017).

Based on existing literature, this study studies the fitness “daily attendance” in social media and sorts out its main characteristics in the context of social media through participant observation and questionnaire survey. This study holds that from the perspective of agenda setting, opinion leaders have a great influence on fitness “daily attendance”. At the same time, in fitness activities, the audience is divided into student groups and fan groups due to different participation motives, which constitute various types of communication relations with communicators. In addition, this study finds that communication contents such as fitness meals have certain impacts on promoting the continuity of fitness “daily attendance”. This study argues that in the context of social media, the study of fitness “daily attendance” can help clarify the characteristics and value of mass sports participation under the new communication situation, which needs to be sorted out and refined in further research.

2. Literature Review

2.1. Social Media: Gathering of Fitness Enthusiasts

In the era of big data, social media is endowed with the function of empowerment, which enables multiple audiences to express their opinions freely through the platform (Zhou et al., 2024). The research and application of social media in sports is increasing year by year, which is mainly due to the popularity of social media and its application in sports communication, marketing and fan interaction (Kennedy & Hills, 2009). When it comes to the role of social media in sports communication, the influence of social media on female athletes is deepening. For example, the research on news reports related to female athletes has confirmed news content is likely to affect the evaluation of female athletes indirectly, which also occurs in social media (Fink, 2015).

Through social media such as Xiaohongshu and Instagram, sports fans can get game information, player dynamics and event comments in real-time, which promotes the spread of sports culture and widely disseminates the values of athletes (Rowe & Gilmour, 2010). Social media has a direct influence on the interaction of sports fans, and fitness enthusiasts are also a type of sports fans. Meanwhile, social media provides a more convenient and real-time interactive platform for fitness enthusiasts (Hutchins & Rowe, 2012). Sports fans such as fitness enthusiasts can exchange fitness experiences, discuss fitness skills and even participate in offline competitions on social media. This interaction not only enhances enthusiasts’ sense of participation and belonging, but also provides more marketing opportunities for sports organizations and brands (Gibbs & Haynes, 2013).

To sum up, the research on social media in sports involves many aspects, including sports communication, sports marketing, sports fans, fitness meal culture etc. These studies are helpful to profoundly understand the role and value of social media in sports, and provide useful reference and enlightenment for sports organizations and brands. In the future, with the continuous development and innovation of social media, the research in this field will be more in-depth.

2.2. Fitness Enthusiasts and “Daily Attendance”

Fitness enthusiasts are a special type of sports fans. In recent years, with the rising social media and fitness culture, the “daily attendance” of fitness enthusiasts has attracted widespread attention. This phenomenon not only reflects the pursuit of a healthy life in modern social life, but also reveals the importance of social media in shaping and promoting fitness culture (Grainger et al, 2009). The “daily attendance” behavior of fitness enthusiasts is mainly manifested in the fact that fitness enthusiasts share their fitness process, achievements and experiences on social media. This behavior is highly visual and interactive. Participants usually upload photos, videos and texts, record their exercise progress and experiences, and interact with other fitness enthusiasts (Hang et al, 2018).

In the United States, research has designed a mobile social network application to supervise fitness enthusiasts on “daily attendance”. Users can evaluate gym traffic and equipment usage according to other users’ “daily attendance” (Kazmi et al, 2016). Fitness “daily attendance” has clear regularity. In other words, it shows clear periodic characteristics in time. For example, the fixed period of daily,

weekly or monthly “daily attendance” duration is to form a continuous record and display (Ross & Sabey, 2015). The motivation of fitness “daily attendance” is diverse, including self-display and recognition, supervision and encouragement, social needs and interaction, etc. In addition, fitness “daily attendance” has a rich impact on society, such as promoting healthy lifestyles and the development of the fitness industry (Carlson, 1994).

In conclusion, fitness “daily attendance” is a complex and interesting social phenomenon, which is not only the embodiment of the modern pursuit of a healthy life, but also the epitome of cultural changes in social media. In the future, with the development of science and technology as well as the progressing social civilization, this phenomenon will continue to survive and thrive, providing more space for research and discussion.

3. Research Methods and Results

3.1. Research Methods

Participant observation, as a commonly used research method in social science research, means that researchers go deep into the life of research objects and make direct observations in their actual participation in daily social life. Participant observation requires researchers to participate in research objects’ daily lives and do not necessarily reveal their true identity to obtain more real and in-depth observation data. Participant observation is vital to case study and qualitative research as a critical method of social investigation and research. Based on participant observation, the research on the fitness “daily attendance” in this study emphasizes better interactivity usage, which makes researchers better integrate into the observed groups, and understand their behaviors and cultures, thus obtaining more comprehensive and in-depth information. Besides, participant observation helps reduce the influence of researchers on observed objects, making the research results more comprehensive and objective.

The key to participant observation mainly includes the following aspects. Firstly, clarify the research theme and purpose, which involves the social phenomenon, crowd, behavior or culture. A clear research theme and purpose is helpful to keep the focus in the follow-up observation and avoid deviating from the theme. Secondly, select observation objects and scenes, and choose suitable observation objects and scenes according to the research theme, including specific communities, organizations, families, public places and so on. Thirdly, engage in the observation site and establish a relationship. Before entering the observation site, researchers need to formulate an observation strategy. Specifically, participate in the fitness “daily attendance” on social media to smoothly enter the site and integrate into the observed group. Furthermore, when observing and recording, researchers can take notes, screenshots, audio and video records, etc., so as to ensure objectivity and detail in the recording process. Finally, the observation report is organized and completed. Through the classification, coding, statistics and interpretation of observation data, the research report is written to clearly show the research process and findings.

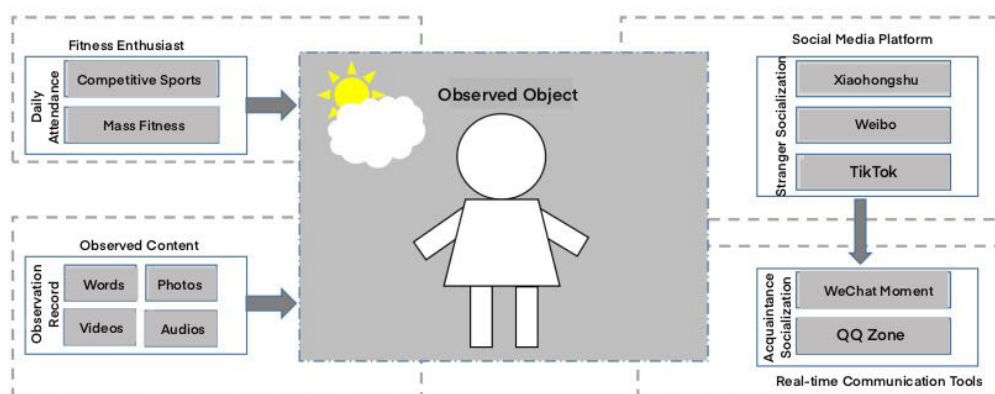


Figure 1. Schematic Diagram of Participatory Observation

3.2. Research Results

Table 1. Basic Information of Observed Objects (N=6)

Account Subject	Gender	Data Dissemination	Brief Account Introduction	Main Posts of Fitness “Daily Attendance”
It's Bella (Bella是贝拉啦)	Female	25,000 fans	Sportive mother loving eating	Girls’ gym practice plan: 3 times a week
Sport-Loving Sarah (爱运动的莎儿)	Female	576,000 fans	With self-discipline and freedom to be thinner and more beautiful	Train to shape the body. Follow practice to lose weight
Beautiful Rosy (美丽的大肉肉)	Female	295,000 fans	Eat and exercise well	Four-week diet. A week of fat burning practice. "How to force yourself to lose weight".
Miss Lee Won't Eat (小李不吃)	Male	1.358 million fans	Experts on fat reduction, shaping and muscle building, and exercise nutrition physiology for 9 years	How easy is it to lose weight with the right method for a month?
Leo (陈海诺Leo)	Male	93,000 fans	China's first professional fitness model champion athlete	Challenge: Lose 30 pounds in 30 days
TANK and his Sister (TANK和嫂子)	Male	236,000 fans	Fitness blogger with millions of followers in the whole network	What do you eat to reduce fat? Control diet.

Table 2. Basic Demographic Characteristics (N=100)

Name	Options	Frequency	Percentage (%)	Cumulative Percentage (%)
Gender	Female	60	60.00	60.00
	Male	40	40.00	100.00
Age	20 years old and below	58	58.00	58.00
	21-30 years old	35	35.00	93.00
	31-40 years old	5	5.00	98.00
	41-50 years old	2	2.00	100.00
Have you seen Xiaohongshu's fitness “daily attendance”	Yes	57	57.00	57.00
	No	43	43.00	100.00
Total		100	100.0	100.0

To understand the situation of fitness “daily attendance”, this study designed a questionnaire survey, which was distributed to the viewers of Xiaohongshu fitness bloggers. Meanwhile, a supplementary investigation is made on the fitness “daily attendance” of the observed objects. Fitness enthusiasts’ “daily attendance” has many influences on fitness, which are both positive and negative. This study

collates and analyzes the collected observation data and explores the motivation, characteristics and influence of fitness enthusiasts' "daily attendance". For example, the psychological factors such as self-motivation and social needs behind the "daily attendance" behavior can be interpreted from a psychological perspective.

In this study, a questionnaire survey was completed through wjx.cn in March 2024, with 100 questionnaires collected by non-probability sampling. Through the questionnaire, it is found that most of the samples are female in terms of gender with a proportion of 60.00%. The proportion of male samples is 40.00%. In terms of age, most of the samples are 20 years old and below with a total of 58.0, accounting for 58.00%. In addition, the proportion of samples aged 21-30 is 35.00%. According to "Have you seen Xiaohongshu's fitness 'daily attendance'", more than 50% of the samples signify "yes" and 43.00% of the samples signify "no".

4. Research Findings

4.1. Main Findings of Questionnaire Survey

According to the analysis, the reliability coefficient of this study is 0.919, which is greater than 0.9, reflecting the high reliability quality of research data. As for the "coefficient α of deleted items", the reliability coefficient will not increase obviously after deleting any item, so it shows that the item should not be deleted. According to the "CITC value", the CITC values of analysis items are all greater than 0.4, which reflects that there is a good correlation between the analysis items of the questionnaire and shows good reliability. To sum up, the data reliability coefficient of this study is higher than 0.9, which proves that the data reliability is of high quality and can be used for further analysis.

Table 3. Reliability Test and Analysis Table

Cronbach Reliability Analysis-Simplified Scheme		
Number of Items	Sample Size	Coefficient Cronbach α
8	100	0.919

Table 4. Validity Test Analysis

Test of KMO and Bartlett		
KMO value		0.908
Bartlett Sphericity Test	Approximate chi-square	513.230
	df	28
	p	0.000

In the validity test, we found that the commonality values of all research items are higher than 0.4, which shows that the information on the research items can be effectively used. In addition, the KMO value is 0.908, which is greater than 0.6 with a high validity value. Meanwhile, the variance explained rate of a factor is 64.031% and the cumulative variance interpretation rate after rotation is 64.031% > 50%. It means that the information on research items can be extracted effectively. Finally, this study combines the factor load coefficient to confirm the corresponding relationship between factors (dimensions) and research items, which finds that the factor load coefficient is expected to be consistent. If it is consistent, it has validity, otherwise it needs to be readjusted. When the absolute

value of factor load coefficient is greater than 0.4, there is a corresponding relationship between options and factors.

According to Pearson correlation analysis, this study found that the correlation between gender and most items such as “I like to watch the posts of fitness bloggers’ ‘daily attendance’ on Xiaohongshu” is negative, which shows a significant level of 0.01, proving a significant negative correlation between gender and most questions of the scale. Hence, **men’s recognition of fitness “daily attendance” is low among respondents, and women are more inclined to choose fitness “daily attendance”**. In addition, there is no correlation between gender and “I like to post on social media when imitating fitness bloggers”.

The correlation between age and most items such as “I like to watch the posts of fitness bloggers’ ‘daily attendance’ on Xiaohongshu” is positive, which shows a significance of 0.05 or 0.01, indicating a significant positive correlation between age and most items. Hence, **among the respondents under 40 years old, the older people have higher recognition of fitness “daily attendance”, while that is not the case for the younger people**. In addition, there is no correlation between age and “I think fitness bloggers are healthy and fashionable in their ‘daily attendance’”, “I hope to recommend friends to accompany me to imitate fitness bloggers’ ‘daily attendance’” and “fitness bloggers are more suitable for taking photos and posting on social media after their “daily attendance” is effective”.

Table 5. Pearson Correlation Analysis

Pearson Correlation-Standard Scheme		
	Gender	Age
I like to watch the fitness bloggers’ “daily attendance” on Xiaohongshu.	-0.296**	0.201*
I like to collect the fitness bloggers’ “daily attendance” on Xiaohongshu.	-0.286**	0.237*
Seeing “daily attendance” photos of fitness bloggers posted on social media such as Xiaohongshu, I would like to try it.	-0.301**	0.234*
When imitating fitness bloggers’ “daily attendance”, I like to post on social media.	-0.169	0.279**
When participating in “daily attendance” like fitness bloggers, I think they are very healthy and fashionable.	-0.359**	0.101
I hope to recommend friends to accompany me to imitate fitness bloggers’ “daily attendance”.	-0.211*	0.120
I hope I can participate in “daily attendance” like fitness bloggers and become a fitness enthusiast.	-0.242*	0.205*
Fitness bloggers are more suitable for taking photos and posting on social media after their “daily attendance” is effective.	-0.199*	0.128
* p < 0.05 ** p < 0.01		

After using descriptive statistical methods to make descriptive statistics on the obtained data, this paper finds that “I think fitness bloggers are healthy and fashionable in the ‘daily attendance’”, “I hope I can participate in “daily attendance” like fitness bloggers and become a fitness enthusiast”, and “fitness bloggers are more suitable for taking photos and posting on social media after their “daily attendance” is effective” are prominent in the numerical performance of average standard deviations.

Table 6. Descriptive Analysis

Name	Mean ± Standard Deviation	Variance	Median
I like to watch the fitness bloggers' "daily attendance" on Xiaohongshu.	2.900 ± 1.176	1.384	3.000
I like to collect the fitness bloggers' "daily attendance" on Xiaohongshu.	2.650 ± 1.290	1.664	2.000
Seeing "daily attendance" photos of fitness bloggers posted on social media such as Xiaohongshu, I would like to try it.	2.950 ± 1.226	1.503	3.000
When imitating fitness bloggers' "daily attendance", I like to post on social media	2.390 ± 1.163	1.351	2.000
When participating in daily attendance like "fitness bloggers", I think they are very healthy and fashionable.	3.500 ± 1.087	1.182	4.000
I hope to recommend friends to accompany me to imitate fitness bloggers' "daily attendance".	2.950 ± 1.167	1.361	3.000
I hope I can participate in "daily attendance" like fitness bloggers and become a fitness enthusiast.	3.160 ± 1.135	1.287	3.000
Fitness bloggers are more suitable for taking photos and posting on social media after their "daily attendance" is effective.	3.200 ± 1.239	1.535	3.000

4.2. Main Findings of Participant Observation

The theme of this participant observation is fitness enthusiasts' "daily attendance", aiming at exploring the psychological motivation, social impact and significance of fitness itself by deeply participating in daily life and fitness enthusiasts' "daily attendance". This study selects a group of active fitness enthusiasts as observation objects, including but not limited to individuals or groups who exercise in gyms, parks, homes and other places. The implementation period of participant observation is 30 days, and the number of observations is 3 times, which was implemented and completed in March 2024. This study mainly observes the fitness "daily attendance" on social media, such as Xiaohongshu and other platforms. During the participation, researchers need to avoid interference with the observed objects, including direct observation, interview and communication, social media analysis, etc.

It is observed that this study mainly obtains the following findings:

Firstly, fitness "daily attendance" is an agenda setting conducted by opinion leaders. First of all, the functional effect of fitness "daily attendance" has been repeatedly emphasized by webcast influencers who act as opinion leaders, so as to attract the fitness "daily attendance" participants. For example, @ It's Bella sets "back shaping" and "training peach buttocks" as labels in the released news. The main purpose of these contents highlighting the fitness effect is to attract fans' attention and promote the continuity of fitness "daily attendance".

"Is it not enough to pull up the front and back sides of the buttocks and thighs?" (fans 01, 2004-02-24)

"It is recommended to release the tense muscles on the front and back sides of thighs before training/activate the buttocks/pay more attention to details during training" (@ It's Bella, 2024-02-24)

In fitness "daily attendance", fans' attention to fitness effect constitutes the main motivation to participate in fitness "daily attendance". Thus, focusing on fans' attention is always a vital mission

of opinion leaders for fitness daily attendance. Hence, setting the fitness effect as a label effectively solves the problem that fans are difficult to concentrate on.

Secondly, the opinion leader's fitness "daily attendance" will simulate the "online fitness" class and conduct activities. It not only satisfies the visual experience of fans, but also attracts "pure online students" and other student groups. The research on the fan group of "Liu Genghong Girls" shows that the student group and the fan group constitute the participants of fitness "daily attendance" (Wang & Tu, 2023).

"Today is the fourth back training in the gym suitable for girls. The warm-up activation, formal training and stretching after training have been fully explained. Sisters who want to solve the hunchback of round shoulders and improve their posture can practice" (@ It's Bella, 2024-02-17)

In these posts with "complete explanation" and "detailed explanation of fitness coach" as the content or keywords, the opinion leader of fitness "daily attendance" acts as the role of teaching guidance, which embeds the process of fitness "daily attendance" into the curriculum setting. In addition, keywords such as "how many exercises a week" reflect users' sense of participation in online fitness. The positive interaction between opinion leaders and fans can also promote fans' motivation to participate in online fitness "daily attendance".

Thirdly, to improve the continuity of fitness "daily attendance", opinion leaders will guide participants to make rational use of fitness meals and other improvement effects. Generally speaking, to reduce fat more effectively, fitness meals are usually cooked with less oil and less salt, but it is difficult for fans to persist for a long time.

"Is 150g rice raw or cooked?" (Fans 02, 2004-01-03)

"Cooked rice. Otherwise, 150g raw rice is too much!" (@ Beautiful Rosy, 2024-01-03)

During the fitness "daily attendance", "big base" or "small base" based on body mass index is a commonly used term. This parameter is not only related to physical fitness, but also helps judge the physical fitness of participants in the initial stage (Zhang et al., 2022). Opinion leaders share diversified and rich methods of making fitness meals and lead fans to reduce fatigue during the fitness and fat reduction, so as to achieve a happy mood by satisfying diet and last the fitness "daily attendance" longer.

From this perspective, the opinion leaders in the fitness "daily attendance" give full play to the role. Meanwhile, fans and students can be attracted to participate in fitness "daily attendance" by constructing online fitness classes. In addition, it meets a variety of practical needs of the audience in many aspects, such as urging the completion of fitness "daily attendance", learning a good diet to achieve fitness effect, etc. During the research, this paper finds that the digital fitness "daily attendance" not only meets the social needs of users' self-display and recognition, supervision and encouragement, but also stimulates sufficient motivation for optimizing media platform organization and communication space.

5. Conclusion and Discussion

This study makes a participant observation on the fitness "daily attendance", which found that the agenda setting of webcast influencers, users' participation motivation and the communication content of fitness jointly influenced the fitness "daily attendance". First of all, as for agenda setting, the information released by fitness webcast influencers can often be seen after a few days. The time lag of posting fitness "daily attendance" is helpful to stimulate the improvement of the agenda effect. Moreover, as for the user's participation motivation, in addition to the student group for learning fitness knowledge, the fan group that worships and likes the fitness webcast influencers is also one of the main users, which helps the differentiation and accurate communication of different users. Finally, as for the communication content of fitness, the addition of communication content such as fitness meal enriches the publishing content of fitness "daily attendance" and promotes the effective

interaction between fitness webcast influencers and users. In the future, studies can start from the fitness “daily attendance” and conduct further research on the forms of mass sports participation in combination with social media, so as to clarify the role of media in promoting public sports participation.

References

- [1] Huang, Q. L., & Deng, X. H. (2017). Media sports participation. *Journal of Wuhan Sports University*, (11), 25-29.
- [2] Wang, J. (2023). Participation, presentation and satisfaction: The transformation of body communication in virtual world—Based on the analysis of checkpoint attendance on digital platform. *Contemporary Communication*, (05), 104-108.
- [3] Wang, L. J., & Tu, C. F. (2023). Identity type and construction logic of fitness groups in webcast room—A web ethnography investigation based on “Liu Genghong girls”. *Journal of Physical Education*, (04), 50-55.
- [4] Zhang, Q., Shi, K. X., & Wang, Z. Y. (2022). Study on the time change trends of physical fitness test and its relationship with body mass index among college students. *Chinese Journal of Health Education*, (01), 56-61.
- [5] Zhou, M., Zhi, H., & Zhao, X. L. (2024). Why “frisbee girl”: A study on the factors influencing sports stigmatization in the social media environment. *Journal of Beijing Sports University*, (01),95-106.
- [6] Carlson, T. B. (1994). Why students hate, tolerate, or love gym: A study of attitude formation and associated behaviors in physical education. University of Massachusetts Amherst.
- [7] Kazmi, M., Stanfill, S., & Nitschke, S. (2016). Gym Check System. scholarlycommons.pacific.edu.
- [8] Kennedy, E., & Hills, L. (2009). *Sport, media and society*. Berg.
- [9] Fink, J. S. (2015). Female athletes, women's sport, and the sport media commercial complex: Have we really “come a long way, baby”? *Sport Management Review*, 18(3), 331-342.
- [10] Gibbs, C., & Haynes, R. (2013). A phenomenological investigation into how Twitter has changed the nature of sport media relations. *International Journal of Sport Communication*, 6(4), 394-408.
- [11] Grainger, A., Newnham, J. I., & Andrews, D. L. (2009). Sport, the media, and the construction of race. *Handbook of Sports and Media*, 482-504.
- [12] Hang, M., Pytlarz, I., & Neville, J. (2018, July). Exploring student check-in behavior for improved point-of-interest prediction. In *Proceedings of the 24th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining* (pp. 321-330).
- [13] Rowe, D., & Gilmour, C. (2010). Sport, media, and consumption in Asia: A merchandised milieu. *American Behavioral Scientist*, 53(10), 1530-1548.
- [14] Ross, S. W., & Sabey, C. V. (2015). Check-in check-out+social skills: Enhancing the effects of check-in check-out for students with social skill deficits. *Remedial and Special Education*, 36(4), 246-257.