The Semiotics of Culture and the Transmedia Approach: Strategies for Intrinsic Motivation in Yoga Practice within Educational Health Contexts

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Abstract

Yoga, officially recognised in Brazil by the National Policy of Integrative and Complementary Practices (PNPIC), faces significant challenges in its incorporation into Western culture, particularly in the educational and health contexts. This study explores how the transmedia approach can be utilised to enhance students' intrinsic motivation for practising Yoga within the school environment, especially in Physical Education classes. The research adopts a semiotic perspective to understand how Yoga, as a form of bodily expression, can be re-signified and integrated into contexts that present cultural and symbolic resistance. The methodology employed includes the collection and analysis of data through pre-intervention questionnaires and the application of the Intrinsic Motivation Inventory (IMI) to assess the impact of the transmedia intervention on students' motivation. The intervention was conducted with 100 primary and secondary school students, using various media such as YouTube, Instagram, and WhatsApp to facilitate the cultural translation of Yoga. The results indicate that transmedia storytelling significantly contributed to the participants' intrinsic motivation, promoting greater adherence to and understanding of Yoga as a tool for promoting physical and mental health. The transmedia approach proved effective in creating cultural translation zones that facilitated the re-signification of Yoga and increased student engagement. However, the study suggests that long-term analyses are necessary to determine whether the practice of Yoga will be incorporated sustainably into the participants' lives.

Keywords: *Semiotics of Culture; Transmedia; Intrinsic Motivation; Education; Translation*

1. Introduction

The introduction of Yoga into Brazil's *Política Nacional de Práticas Integrativas* e *Complementares* (PNPIC) through Ordinance No. 849 of March 27, 2017, marks a significant advancement in recognizing traditional therapeutic practices within the *Sistema Único de Saúde* (SUS). This official acknowledgment underscores the effectiveness of Yoga in promoting public health and well-being. However, from a semiotic perspective, Yoga faces symbolic conflicts concerning its interpretation and the cultural spaces it occupies, both in its ancient Eastern roots and its adaptation to contemporary Western contexts.

The role of physical educators as health professionals and the cultural resistance towards Yoga have been widely discussed. These challenges, combined with the redefinition of the *Política Nacional de Promoção da Saúde* (PNPS) through Ordinance No. 2.446/GM/MS, emphasize the integration of traditional knowledge and complementary practices in health promotion [3]. The World Health Organization (WHO) has also supported the recognition and inclusion of traditional and complementary medicine within national health systems, a perspective reflected in Brazil's *Base Nacional Comum Curricula*r (BNCC). The BNCC includes Yoga within the Physical Education curriculum [2], addressing its role in body awareness through gentle movements and postures derived from ancient Eastern practices.

Despite these advances, significant gaps remain in the general population's understanding of Yoga, including among health professionals and academics, which limits its application and recognition within the public health system. Improving this scenario requires a symbolic transformation, particularly within educational contexts, where Yoga can be reinterpreted and integrated into broader health promotion efforts. This study explores how Yoga occupies semiotic spaces *(semiospheres)* within educational contexts, focusing on the symbolic dynamics and cultural conflicts it generates. The research aims to analyze the role of Physical Education as a language system that mediates these emergent symbolic meanings.

By introducing Yoga as a new health practice, symbolic exchanges are facilitated, enabling new cultural texts to emerge through the processes of semiotic translation. This study adopts a transmedia narrative approach to re-signify the Yoga sign, positing that the use of multiple media platforms can enhance symbolic transformation and foster intrinsic motivation for Yoga practice. Transmedia storytelling is recognized for its educational benefits, shifting focus from teacher-led instruction to more emotionally engaging, student-centered experiences [18]. This narrative method, supported by Self-Determination Theory [5],[6],[7], promotes intrinsic motivation by encouraging autonomy, curiosity, and deeper engagement with the cultural significance of Yoga.

In summary, this research examines the cultural translation of Yoga within educational settings through a transmedia narrative approach. By utilizing various media platforms, it seeks to enhance students' motivation to re-signify Yoga as a health-promoting practice, overcoming cultural resistance and fostering a deeper understanding of body culture.

3. Methodology

The methodology adopted for this study is configured as a qualitative approach, allowing not only investigation but also intervention in the studied reality. Two main tools were used for data collection: a pre-intervention context analysis form and a motivation scale. The initial objective of the form was to map students' perceptions of the Yoga sign, providing an overview of the conceptions and attitudes towards this sign.

After collecting the data obtained in the pre-intervention context analysis form, the data analysis was carried out through the lens of cultural semiotics. For this, a methodology of cultural semiotic analysis was developed, adapted from the concepts of Iuri Lotman [12], [13], [14]. This methodology was applied in the context of health education, using a semiotic tabulation model that represents culture as a sequence of individual significations, forming a shared cultural image. The analysis makes use of Venn diagrams to map the interactions between signs, allowing a visualisation of semiospheres and their semantic relationships. This highlights the model's ability to identify cultural patterns by analysing interviews or responses as "pixels" within a larger image. The organisation of data into semantic cores and the synthesis of responses allow a deep understanding of the cultural dynamics and modelling forces present in cultural discourses (Figure 1).

Figure 1 - Example of Semiotic Culture Analysis Diagram
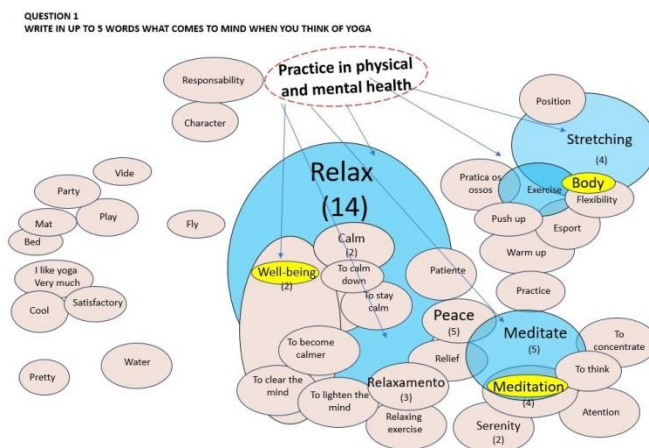
Author: Self

After the intervention, a motivation scale was applied to assess the students' level of motivation [2]. The combination of these tools facilitated a deeper understanding of the changes in students' perceptions and motivation regarding Yoga.

The research was conducted at *CIEP 178 João Saldanha*, a public educational institution located in the municipality of *Belford Roxo, RJ,* with the participation of Professor Talita de Assis, who was responsible for the participating classes. The intervention involved two classes: one from the 6th year

of primary education and another from the 3rd year of secondary education, totalling 100 students in basic education. The selection of the classes was done for convenience and at the discretion of the institution's management and the responsible teacher, through an open invitation.

The inclusion criteria established were: 1) being enrolled in the school; 2) agreeing to participate in the research and signing the consent form; 3) obtaining the guardians' assent, agreeing with the participation and signing the assent form. The exclusion criteria were: 1) having a diagnosed pathological or psychological condition that would prevent or not recommend participation in the physical activities of the intervention; 2) having physical or psychological restrictions (such as agoraphobia, for example) that would prevent or not recommend participation in group activities, making it difficult to perform the standardised activities. It is important to note that there were no volunteers who met the exclusion criteria. Of the 100 participants, 47 were in the 6th year (n = 47) and 53 in the 3rd year (n = 53). The age range for the 6th-year students varied from 10 to 14 years, with a predominance of students aged 11-12; while the age range for the 3rd-year students varied from 16 to 21 years, with a predominance of students aged 17-18

The intervention was conducted in three key stages:

First stage: A pre-test form was developed to map participants' habits and perceptions regarding technology use, supporting the planning of transmedia narratives and the cultural interpretations of Yoga. The form consisted of four blocks: student identification, digital technology usage habits, video consumption patterns, and participants' mental images of Yoga, technology, and religiosity. The preliminary results were crucial for understanding the participants' sociocultural context and media consumption habits, guiding the intervention's development.

Second Stage: The intervention took place over six weeks, involving two weekly Yoga sessions in physical education classes, alongside media content delivered via YouTube, Instagram, and WhatsApp. The first week focused on establishing rapport, distributing consent forms, and introducing participants to the media platforms. Yoga practices, including breathing techniques and postures, were integrated into the curriculum, with supplementary content addressing Yoga culture and health benefits. Weekly feedback was gathered to adapt the intervention to participants' needs, enhancing engagement and cultural translation. Various data collection tools, including field notes and media access statistics, were used to document the intervention. The IMI (Intrinsic Motivation Inventory) was applied in the final session to assess participants' motivation.

Third Stage: Motivational self-assessment was conducted using the IMI, a validated multidimensional scale that evaluates dimensions such as interest, competence, effort, choice, and value. Scores below 3.0 indicated low motivation, between 3.0 and 6.0 indicated moderate motivation, and above 6.0 indicated high motivation. Cronbach's Alpha coefficient was used to ensure data reliability.

4. Discussion

The study draws on semiotic theory, particularly Lotman's concept of *semiospheres*, to explore how transmedia narratives create dynamic semiotic spaces that facilitate cultural translation. By combining Lotman's and McLuhan's ideas [17],[18], the study highlights how the medium shapes meaning production, with transmedia structures actively influencing how Yoga is perceived. The flexibility of allowing participants to choose their preferred medium reduces resistance, fostering personalized engagement. Transmedia narratives serve as organizing principles for discursive spaces, promoting intrinsic motivation by encouraging students to explore and make meaning in a self-driven manner, rather than through external imposition.

The internal consistency analysis of the instrument was carried out with the participation of 89 students from *CIEP João Saldanha*, comprising 46 students from the sixth year of primary education (29 girls and 17 boys) and 43 students from secondary education (23 girls and 15 boys). Five students chose not to identify themselves and therefore did not provide their names. It is noteworthy that although the intervention was conducted with 100 students, only 89 attended on the day of the motivation scale application.

The evaluation of the students' motivation concerning their participation in the intervention classes

resulted in a Cronbach's Alpha coefficient of 0.88. This value indicates excellent internal consistency of the students' responses, suggesting that the instrument used is reliable for assessing the participants' motivation concerning the proposed activity (Table 1).

Table 1 – Intrinsic Motivation Inventory (IMI) Results

Interest/enjoyment			
Students	Average	**Motivated**	**Unmotivated** **Highly Motivated**
89	4,3	85%	7,80% 4,50%

Perceived Competence			
Students	Average	**Motivated**	**Unmotivated** **Highly Motivated**
89	3,75	62,90%	32,50% 4,50%

Effort/Importance			
Students	Average	**Motivated**	**Unmotivated** **Highly Motivated**
89	3,72	78,60%	19,10% 2,20%

Pressure/Tension			
Students	Average	**Motivated**	**Unmotivated** **Highly Motivated**
89	3,64	65%	28% 6,70%

Perceived Choice			
Students	Average	**Motivated**	**Unmotivated** **Highly Motivated**
89	3,4	55%	39% 5,60%

Value/Usefulness			
Students	Average	**Motivated**	**Unmotivated** **Highly Motivated**
89	4,7	69,70%	16% 21%

Relatedness			
Students	Average	**Motivated**	**Unmotivated** **Highly Motivated**
89	3,7	69,60%	27% 3%

Author: Self

The assessment of students' intrinsic motivation, as measured by the IMI, revealed the following results across the different subscales:

Interest/Enjoyment: The average score obtained was 4.3, indicating that the majority of students were motivated (85%), with a small percentage unmotivated (7.8%) and an even smaller percentage highly motivated (4.5%). This subscale is responsible for measuring students' interest during the activity period. Among the most highly rated questions by the class were "I really enjoyed doing this activity" and "I found this activity pleasant," both with averages above 5. It is also interesting to mention the inclusion of reverse questions such as "This activity did not hold my attention at all" and "I

found this activity boring," which received lower scores with an average of 2. This result suggests that the use of the transmedia format stimulated curiosity and genuine interest among the students in the class, potentially leading to an increased attentional process within that group.

Perceived Competence: The students were also considered motivated, with an average score of 3.75 in this subscale. The majority (62.9%) felt competent to carry out the proposed task, although some found Yoga challenging. This subscale proposes an autonomous assessment of competence during the activity in general, encompassing both responses to questions asked in the classroom and the execution of movements. It is noteworthy that the most highly rated question in this subscale was the statement "I am satisfied with my performance in this activity." However, other questions have a higher weight in relation to the level of competence perceived by the participants, such as the inquiries: "I think I am very good at this activity" and "I believe I did very well in this activity compared to others." It is noticeable that such questions, as well as the others in this subscale (except for the reverse question), are characterised by the inclusion of the intensifier "very," which may have influenced the students' decision not to give a high score. This behaviour may be attributed to the fact that many participants were having their first contact with the practice through this intervention, leading them to consider that they had a relatively short time to develop such competence to a considerable level. Another relevant aspect to consider in this subscale is the presence of low self-esteem, as a significant proportion of the students in both investigated classes did not consider themselves competent to carry out other school activities. It is assumed that this may be a result of a pre-established mental structure in which the participants perceive the absence of the necessary skills to perform the tasks proposed in the school environment. It is believed that this perception may have its origins in social factors, such as the family context [1], or even in the interactions established with teachers [9].

Effort/Importance: The results obtained in the Effort/Importance subscale revealed an average score of 3.72, indicating that the students demonstrated engagement and paid due attention to the content addressed. Notably, the vast majority of participants (78.6%) were motivated, while a smaller proportion (19.1%) did not show motivation. In this context, it is noteworthy that the question with the highest average was "It was important to me to do well in this task." This response suggests that the motivation to perform the task competently emerged intrinsically in the individual, as evidenced by the use of the personal pronoun "me." Such linguistic choice confers on the activity a relevance that originates from the individual's personal development, rather than being motivated by external rewards or the influence of others, as might occur in the following situations: "It was important to the teacher that I did well in this task" or "It was important to my friends that I did well in this task."

Pressure/Tension: In the analysis of the Pressure/Tension subscale, it is crucial to highlight that, although the average was 3.4, the most highly rated questions were the reverse ones, meaning those that oppose the usual significants associated with pressure and tension: "I did not feel nervous at all doing this" and "I was very relaxed doing this." This result suggests that, despite being an evaluative activity within the Physical Education discipline, the transmedia classroom environment managed to fulfil the purpose of the intervention, which was to create a relaxed and calm environment for Yoga practice.

Perceived Choice: The subscale under analysis recorded an identical average of 3.4. It is assumed that the obligatory nature of Yoga as an integral part of the subject's curriculum may have influenced the classes' perception of choice in the activity. Despite this, it is observed that the majority of participants (55%) were considered motivated, while 39% did not show motivation in this subscale. It is worth noting that the most highly rated question, with an average of 5.1, was: "I did this activity because I wanted to." Autonomy was an aspect considered during the intervention process, as it is recognised that it stimulates intrinsic motivation [6],[7],[8]. The students had the freedom to access the content through various media, whether by watching videos, reading posts, or practising in the classroom. It is believed that the ease of access and the multimodal learning approach contributed to the students' decision to participate in the intervention.

Value/Usefulness: This subscale recorded the highest rate of highly motivated students, with an average of 4.7. Many students considered that the practice of Yoga could be beneficial to their daily lives, especially for maintaining physical and mental health. The most highly rated questions were "I think this is an important activity" and "I believe doing this activity can bring benefits to me." Based on these results, it is possible to infer that the process of constructing the meaning of the term "Yoga" to

represent a practice of self-care and health promotion [13] may have influenced this association of the activity with something beneficial to individual health, thus generating a positive symbolic charge for the practice.

Relatedness: The average score obtained in this analysis was 3.7, indicating that the majority of students (69.6%) experienced motivation related to interpersonal relationships with their peers. The most highly rated questions were "I felt that I could really trust this group" and "I felt welcomed by the group." This subscale is related to the basic need for relatedness, which constitutes a component of intrinsic motivation. The feeling of belonging to a particular group contributes to the development of the student's motivational aspect. It is believed that this stimulus was fostered both by the practical classes in the classroom and by the WhatsApp group. Participating in a community and being part of an environment in which everyone is engaged in the same activity can promote a sense of inclusion, considered relevant to this component.

6. Final considerations

This study explored the effectiveness of the transmedia approach as a tool to enhance students' intrinsic motivation for practising Yoga in the context of Physical Education and Health. By using a cultural semiotic perspective, it was possible to understand how Yoga, as a form of bodily expression, can be re-signified and integrated into educational contexts that present cultural and symbolic resistance.

The results obtained indicate that the transmedia approach, by allowing access to multiple platforms and forms of media, facilitated the cultural translation of Yoga and contributed to a more engaging and meaningful learning experience. The use of different media not only increased students' interest and engagement but also promoted a deeper understanding of the benefits of Yoga as a practice for promoting physical and mental health.

The intervention demonstrated that transmedia storytelling is a powerful strategy for overcoming cultural and symbolic barriers, creating cultural translation spaces that allow for the re-signification of Yoga in a school environment. However, to ensure the long-term incorporation of this practice into the participants' lives, it is necessary to conduct long-term analyses to verify the continuity of interest and the practice of Yoga after the intervention ends.

Thus, this study contributes to the field of Physical Education and Health by demonstrating the potential of cultural semiotics and transmedia narratives as teaching tools that not only motivate but also promote the meaningful integration of integrative practices such as Yoga in educational contexts.

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