Comparative Analysis of Gifted and Non gifted Bharatnatyam Students: Identifying Key Characteristics of Talent

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Abstract: The main aim of this research paper is to identify the key characteristics of talent among students of Bharatanatyam, a major Indian classical dance form, and to evaluate differences between gifted and non-gifted students, with a particular focus on those who have passed the second-year Bharatanatyam exams. The paper examines the features a talented student of Bharatanatyam should possess, including cognitive, creative, and technical skills. It focuses on identifying the characteristics of a gifted student and how they distinguish themselves from non-gifted students in Bharatanatyam dance. The study focuses on learners from grades 3 to 5, and a total of 55 students were selected from the Kaveri Group of Institutes, Pune. This research employed both quantitative and qualitative data analysis. Quantitative data analysis involved observation-based evaluations, assessments, and student performance evaluations. The assessment of students' performance was developed based on Natyashastra principles and focused on the rasa (aesthetic), bhava (emotional expression), tala (rhythm), and laya (tempo) aspects. Further, professional Bharatanatyam artists assessed the students' performance (particularly, technical movements and rhythmic precision of the dancers), using various modern techniques, like video analysis and motion-capture technologies.The study also showed a high inter-rater reliability. Qualitative data were collected through a Google Form survey with seven instructors and semi-structured interviews with 20 gurus, which were later subjected to thematic coding in NVivo to enhance reliability through coder triangulation. Quantitative data were analyzed through comparative correlation methods. This research used a variety of statistical tools (descriptive statistics, t-tests, ANOVAs with the Bonferroni correction, and Pearson's correlation) to assess differences between talented and non-talented gifted Learners in memory retention, learning speed, technical accuracy, and emotional expressiveness. The combined presentation includes not only the statistical results but also the qualitative themes of intrinsic motivation, self-directed practice, and advanced pattern recognition, which provide a more comprehensive explanation of how these talented students become so proficient in rhythm synchronisation, spatial accuracy, and expressive depth. The findings offer strategies for teachers, gurus, and parents to identify these highly talented students and to effectively nurture their talents using tailored pedagogical techniques and differentiated curricula, thereby unlocking their creative and technical potential to the fullest extent. This study significantly contributes to the development of gifted and talented Bharatanatyam students, helping to preserve and promote this culturally significant classical art form.

Key words: Gifted education, Talent identification, Bharatanatyam, Indian Classical art form, Natyashastra, Guru shishya Parampara, Motion capture analysis, Performance assessment, cultural Heritage, Pedagogical strategies

Introduction

Talent development in gifted education within Indian classical dances has become a significant aspect of education. “Giftedness in the performing arts refers to a person with exceptional talent in technical skills, expressive abilities, self-motivation, rhythmic coordination, and creativity across various art forms such as dance, music, and theatre”.
India is known for its rich cultural heritage. It has nine classical dances. Among them, Bharatanatyam is the oldest Indian classical dance, originating from Tamil Nadu. It is famous for its intricate footwork, and its theoretical foundation can be traced to Bharatmuni’s Natyashastra, a treatise on Indian classical performing arts (200 BCE). (Ghosh 1950, 1961).
Talent identification in Bharatanatyam is a challenging task. In India, Guru-Shishya Parampara plays a central role in Indian classical performing arts. Usually, the guru identifies the student's talent and nurtures them holistically through close mentorship, technical precision, rhythmic coordination, expressive storytelling, and creativity. Beyond the guru-shishya Parampara, there is no systematic framework for recognising giftedness in Indian classical performing arts.
Jung and Lee (2024) and Đorđević (2023) emphasise the need for early talent identification in the performing arts and highlight the use of differentiated pedagogy to nurture young artists holistically. Similarly, Perperkorn and Wegner (2020) and López-Íñiguez (2024) highlighted the importance of a talent identification model for comprehensive nurturing.
This research focuses on identifying key traitsin gifted and talented young Bharatanatyam artists that differentiate gifted from non-gifted students. These traits were identified by integrating Natyashastra principles and modern performance rubrics, including stage design, costumes, body gestures, facial expressions, and rhythm. These rubrics were used by Kaveri group of institutes for talent identification.
Technological advancements play a transformative role in the performing arts by assessing performances in Indian Classical dance. Motion capture analysis and speed video tools provide an innovative and artistic way to evaluate technical aspects, such as the timing of synchronisation, transitions, body gestures, facial expressions, and micro-expressions. (Ilhan-Cakir, A.2019). The use of such cutting-edge technological instruments along with the Natyashastra principles for examinations would result in a tech-tradition hybrid, which in turn would be a robust, culturally grounded way of discovering talents..

Importance of the study:

The research utilised mixed methods at the Kaveri Group of Institutes, comprising Kaveri International School and Dr Kalamadi Shamarao K Primary School. 55 children in the 3rd-5th grades (age 8-11) were chosen. All these children had at least 2 years of formal Bharatanatyam training, had passed the Levels I & II exams successfully.

This paper investigated the perceptions of 20 Gurus using qualitative methods, focusing on intrinsic motivation, cultural participation, and practice strategies. (Genç, 2014) Pointed out the combination of an interdisciplinary approach and modern technologies for the identification and talent development of young artists. The process of Nurturing is said to involve various cognitive abilities such as memory, learning speed, spatial intelligence, and emotional depth. By integrating traditional models with modern technology and the guidance of gurus, the aim is to create practical tools for talent identification and the subsequent support of gifted Bharatanatyam students.

Literature review:

Talent development in Indian Classical dance is a complex process that requires both cognitive and physical skills. A few research studies and observations of artists have shown that the practice of Bharatanatyam, or any other Indian classical dance, can significantly improve a person's cognitive and physical abilities. In their study, Prakash et al. (2022) highlighted the significance of the extent of the practice, or Riyaz. They noted that, due to neoplastic changes in their performance practice, dancers' auditory memory was enhanced. A couple of researchers have also highlighted the role of technology in dance-based learning. Bhuyan et al. (2022) stated that technology-driven learning within the traditional guru-shishya Parampara helps dancers improve pattern recognition, memory, and processing speed.

In India, the students of classical performing arts are traditionally taught by their Guru. As per Bhatt (2024), the Guru-Shishya Parampara plays a crucial role in Indian Classical arts, which mainly depend on hands-on experience and immersive guidance by the gurus, which not only develop students' technical skills but also their personalities.

Moreover, Meduri (2004) and Kang (2020) have discussed the influence of globalisation on Bharatanatyam and how it can enable community members to become more flexible in preserving the cultural traditions through the performance artists. Gifted and talented students must be given the opportunity and stage to not only come from diverse communities that retain the tradition and culture of the art form but also to face new challenges that will strengthen their adaptability and creativity.

Gifted students show several features or traits that are different from other children. If we want to give them the proper help, we have to look at their psychological and social sides as well. Perfectionism was one of the factors that affected gifted students, says Rozental (2020), and he noted that a loving environment could turn this feature from a problem into a source of motivation.

Moreover, teachers must receive appropriate training so they can efficiently identify gifted students not only in the different areas of the arts but also, as this is the initial step in creating a supportive and nurturing environment (Shabani & Atanasoska, 2021)Kexin, D., & Buang, N. A. (2024).

Pfeiffer (2002) and Mossberg et al. (2023) affirm that well-organised teacher instruction equips teachers with diverse approaches for integrating cognitive and socio-emotional

aspects, recognising the needs of gifted students, and fostering their talent development.

The progress of gifted students in Indian Classical Dance depends on effective methods and personalised learning materials. Moreover, Wen, R. (2023). acknowledge that integrating flipped classrooms and blended learning significantly increases participation in Indian Classical dance training.

Given improvements in technology for identifying talented students, Tu (2024) examined how motion-tracking could be used in ballet to provide more accurate feedback. His points to the necessity of a meticulously planned differentiated instruction that can deepen student learning by meeting the individual needs. By a high-precision machine learning technique, Naaz and Kumar (2023) were able to differentiate Bharatanatyam Mudras, thus pointing out the significant influence of technological aids in the evaluation of performances. Following a gradual approach to the use of AI in teaching methods and keeping an open mind, the authors claim that this could eventually unleash the talents of more gifted students.

Panhale et al. (2021)Kalobo, J. (2024). observed that children who practice Indian classical dance daily and more frequently exhibit higher kinesthetic intelligence. The improvement in the dancers' postures and movements, with increased lumbar lordosis and pelvic tilt, was evident. This advancement and the regular rehearsals are among the ways that demonstrate the manifestation of giftedness in Indian Classical dance.

Developing talent in Bharatanatyam requires multidisciplinary methods for comprehensive development. Based on the findings of Kalinina et al. (2023) and Ayasrah et al. (2023), incorporating a diverse range of multidisciplinary approaches, including other art forms, mathematics, and cultural elements, can serve as a powerful tool to captivate and nurture students to realise their full potential. Conversely, Isabayeva (2023) highlighted the need for psychological testing to support the intellectual, emotional, and overall development of gifted students.

Furthermore, Ronksley-Pavia (2014) argued for the importance of balancing creativity with structured learning, thereby emphasising cognitive and creative growth through various educational approaches.

Additionally, the environment around gifted students also plays a vital role in their development. Daşdemir (2024) puts the family support and encouragement at the top of the list of factors that facilitate the early identification of gifted students and, later on, their artistic growth which is instrumental in the nurturing of gifted talent to the fullest extent.

Gaps and future directions

A significant point of difference lies in the creation of a systematic framework that not only delineates cognitively, emotionally, and culturally the characteristics of the Bharatanatyam students but also distinguishes those students who are gifted from those who are not. It is imperative to explore the extent to which the use of technology

in the identification of talent in Indian Classical dance contributes to understanding the influence of the tradition and socio-cultural factors on students' development. After bridging these gaps, the way for a successful model that identifies and develops the talent of gifted students will be open.

Research objectives

- To identify the key traits of talents in Bharatanatyam students by developing asystematic identification framework by integrating Natyashastra principles and technology-driven motion analysis tools for grades 3 to 5 that define giftedness in cognitive, technical, and expressiveness aspects, and who have completed two years of formal training in Bharatanatyam.
- To compare and analyze the differences between gifted and non-gifted Bharatanatyam students regarding memory retention, learning speed, technical proficiency, rhythmic accuracy, and emotional expressiveness
- To support, promote, and preserve the culture of the classical art form Bharatanatyam by identifying effective strategies that foster excellence in talented young learners.

Research question:

- Which different traits differentiate between gifted and non-gifted Bharatanatyam students in Grades 3–5 regarding cognitive, technical, and emotional expressiveness?
- What degree to quantitative performance metrics align with qualitative indicators of talent development in giftedness?

Research design

Hypothesis

Null hypothesis (H_0): There is no significant difference between gifted and non-gifted Bharatanatyam students in grades 3–5 regarding memory retention, learning speed, and expressive performance.

Alternate hypothesis (H_1): There is a significant difference between gifted and non-gifted Bharatanatyam students in grades 3–5 regarding memory retention, learning speed and expressive performance.

Research method:

This study employs a mixed-methods approach, combining qualitative and quantitative methods. This includes evaluating the performance of Bharatanatyam students in grades 3 to 5 of the Kaveri Group of Institutes to identify traits and compare gifted and non-gifted Bharatanatyam students. This was done by employing integrated performance metrics derived from Natyashastra principles and Motion capture video analysis tools to assess the artist's performance, rhythmic accuracy, and expressive

emotions. A thorough literature review was the third component of the research, which involved digesting and understanding existing strategies for gifted and talented education in the performing arts.

Target group

I have selected Kaveri Group of Institutes for research because of their established reputation in Gifted education. Kaveri Group already has a dedicated unit for talent development and Gifted education, the Kaveri Gifted Education and Research Centre, which demonstrates its commitment to and excellence in nurturing gifted students.
The target group for the study comprises:

Students

Fifty-five Bharatanatyam students from grades 3–5, aged 8–11, from two schools of the Kaveri group of institutes, namely Kaveri International School and KHS Primary in Punewere selected through stratified random sampling, ensuring urban and suburban representation, with the following two criteria with minimum 2 years of formal Bharatanatyam training under the guru and successful completion of Level-I and Level-II examinations from a prominent educational institution.

Bharatanatyam guru

The surveys and semi-structured interviews involved 20 gurus, selected purposively, to gather insights into talent identification in Bharatanatyam. These expert gurus turned out to be key informants in developing a performance assessment rubric to recognise gifted students, which, in turn, helped increase the scope and credibility of the research results.

Quantitative approach

The quantitative part of the study focused on figuring out the distinguishing features of the two groups of Bharatanatyam students: the gifted and the non-gifted ones. The identification of giftedness was based on a set of performance-based rubrics that integrated Natyashastra principles with an objective video analysis of the movement.
The evaluation revolved around two central performances, namely alarippu and Navarasas, with memory retention, technical precision, learning speed, and expressive performance as some of the specific parameters. Senior-level artists assessed the students' performances, and an inter-rater reliability test was used to measure the agreement of the scores and ensure consistency as well as to rule out rater bias. Additionally, the tech-savvy Vicon System was used to capture joint trajectories, assess rhythm synchronisation, and determine students' spatial accuracy for a comprehensive assessment. Descriptive statistics like means and standard deviations were employed for data analysis.
Moreover, Pearson's correlation coefficients were computed to assess relationships among key traits, e.g., the association between learning speed and expressive depth.

This served as a comprehensive and statistically sound characterisation of Bharatanatyam students.

Qualitative approach:

The study has incorporated the knowledge of 20 Bharatanatyam experts, which has been instrumental in refining the performance rubrics. To collect data, a qualitative survey and semi-structured interviews were conducted. Participants responded to the Google Form, while phone, face-to-face, and email interviews were used to conduct the interviews. The thematic analysis was carried out with the help of NVivo thematic coding software, along with two independent analysts for coder triangulation (inter-coder agreement > 0.85) to confirm the results.

Quantitative analysis results:

1. **Mean performance scores of Bharatanatyam assessments (N = 55):**

A total of 55 Bharatanatyam students were evaluated based on two performances, namely Alarippu and Navarasas. The Mean

Hypothesis:

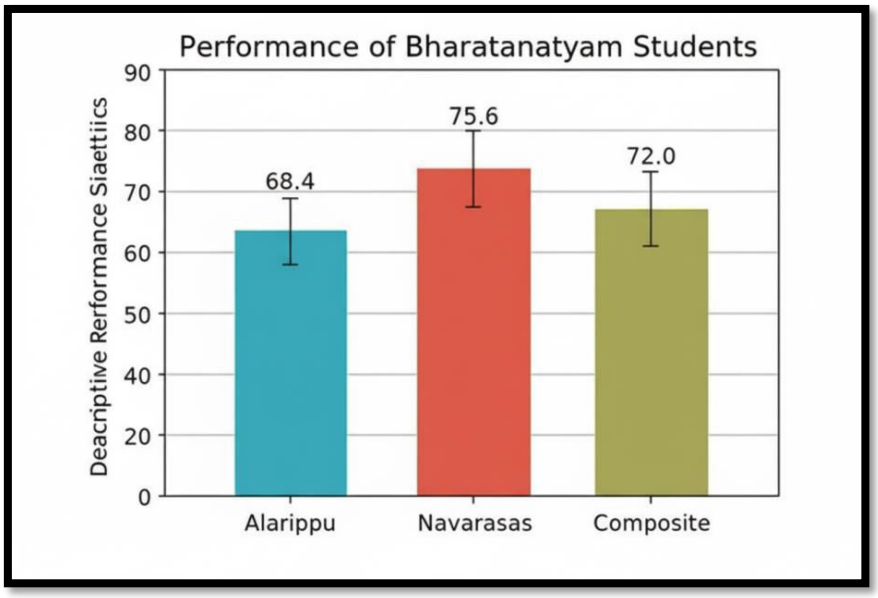
Null hypothesis (H_0): The Mean score of Alarippu and Navarasas does not differ ($M_2 - M_1 = 0$).

Alternate hypothesis (H_1): The Mean score of Alarippu and Navarasas do differ ($M_2 - M_1 > 0$).

Table 1. Mean performance scores (N = 55)

Measure	Mean (M)	SD (σ)
Alarippu	68.4	10.2
Navarasas	75.6	9.4

Figure 1. Descriptive performance bar chart



Interpretation:

The calculated mean scores highlight that on average the scores of the 55 students increased by 7.2 from Alarippu (mean 68.4) to Navarasas (mean 75.6). This showed significant progress and less variation among students' performances. The findings provide instructors with the means to differentiate for students who require additional guidance, to plan differentiated curricula, and to provide advanced pedagogy for gifted and highly talented students in Bharatanatyam.

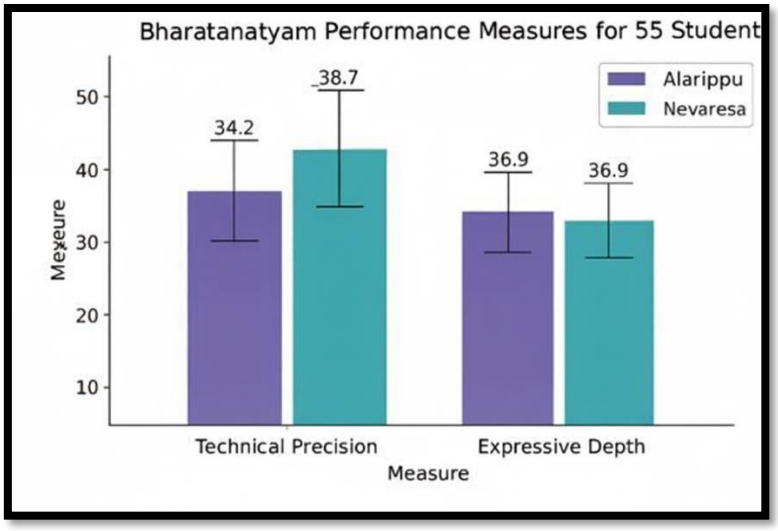
As the results show a notable increase in the mean score, the null hypothesis is rejected and the alternative hypothesis is accepted, indicating a difference in the mean scores between alarippu and navarasas. The steady rise indicates that students' competence improved over time, rather than being due to change.

2. Paired-sample comparisons of technical precision and expressive depth

Table 2. Paired t-Test Results (n = 55)

Dimension	Sequence	Mean (M)	SD (σ)	t (df = 54)	p	Cohen's d
Technical Precision	Alarippu	34.2	5.1			
	Navarasas	38.7	4.8	9.12	< .001	1.23
Expressive Depth	Alarippu	34.1	5.3			
	Navarasas	36.9	5.0	6.45	< .001	0.87

Figure 2: Bar chart comparing Alarippu vs Navarasas for technical precision and expressive depth



Interpretation:

The paired test was conducted for allarippu and navarsas on technical precision and expressive depth. The result shows Significant progress may be evident between

Alarippu and Navarasas: Technical Precision (+ 4.5 points, significant effect (d = 1.23); Expressive Depth + 2.8 points (d = 0.87)), in both cases strong effects indeed (p < 001). That means that focused teaching not only enhances the technical side but also the individual's emotional expression. This allows teachers to see that these outcomes are reliable measures of growth and therefore support the argument for a mixed curriculum that includes both technical skills and the narrative of emotional depth.

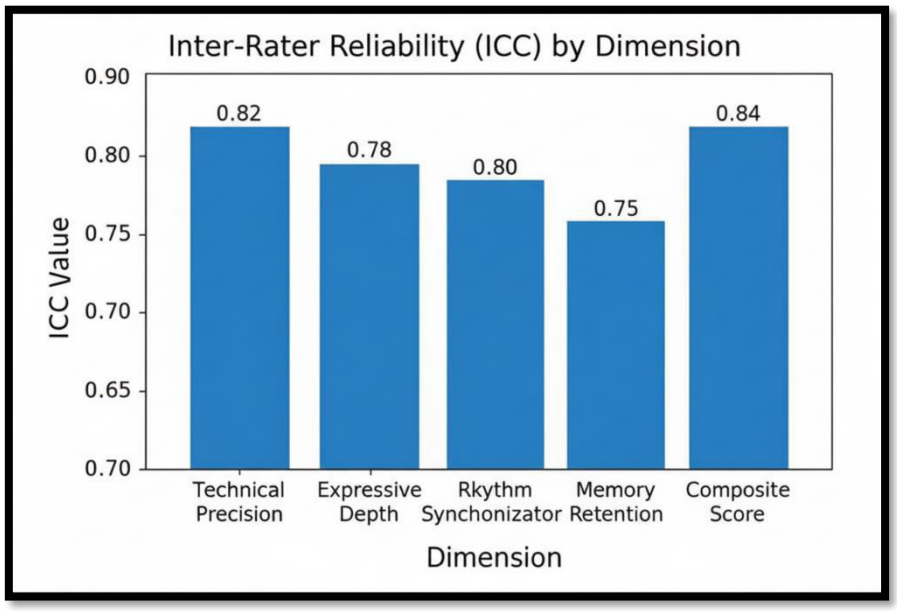
3. Inter-rater reliability test:

The Inter-Rater reliability test was conducted for the Natyashastra based performance rubrics rated by two senior artists.

Table 3: Intraclass correlation coefficients (ICC) by dimension
Ratings by two senior artists; n = 55 performances

Dimension	ICC(2,2)	Interpretation
Technical precision	0.82	Excellent
Expressive depth	0.78	Good
Rhythm synchronization	0.80	Excellent
Memory retention	0.75	Good
Composite score	0.84	Excellent

Figure 3: Inter-rater reliability (ICC) by dimension



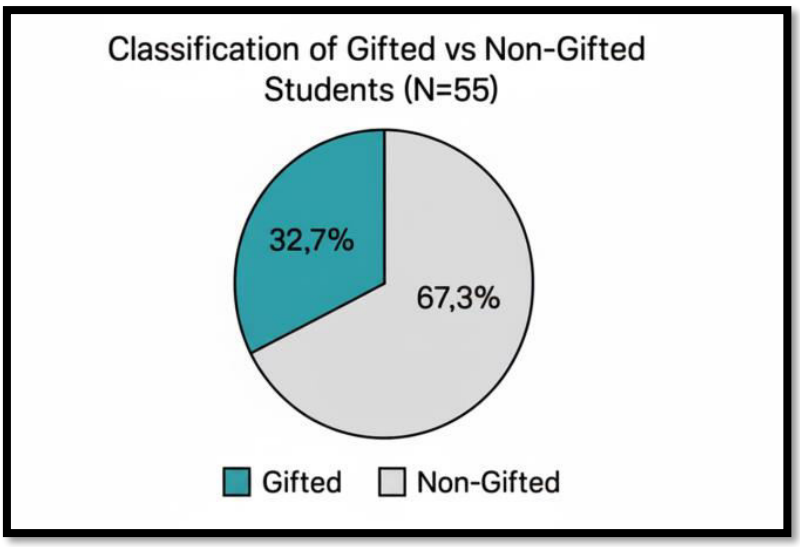
The performance rubrics rated by two senior artists were subjected to an inter-rater reliability test. The results show that the inter-rater reliability was high, with evaluators

demonstrating good levels of accuracy and consistency across all but two assessment rubrics, with ICCs ranging from 0.75-0.78 (good) to 0.80-0.84 (excellent).
The high ICC value testifies to the clarity of the Nāṭyaśāstra-based rubric and endorses its consistency for talent identification and evaluation. Making the assessment model suitable for a wider inter-individual and trained consensus. Regular calibration could further enhance the consistency of these reliable results.

4. Classification of gifted and non-gifted students

Table 4: Gifted vs. non-gifted proportions (N = 55)

Category	N	Percentage
Gifted	18	32.7%
Non-Gifted	37	67.3%



Interpretation:

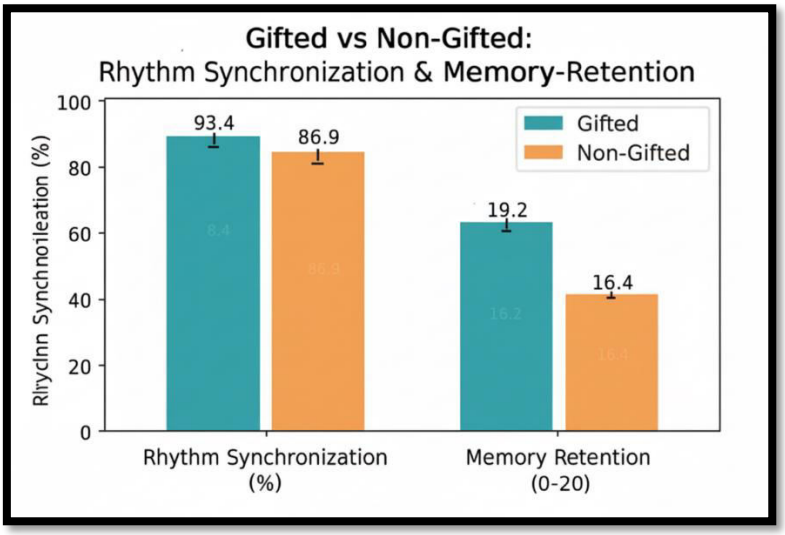
Among early 5th graders, gifted students accounted for 32.7%, and when combined with non-gifted students, this rose to 67.3% based on technical, rhythmic, expressive, and memory retention skills. This ratio enables institutes to offer enrichment opportunities, including a tailored curriculum for gifted students in Bharatanatyam (e.g., advanced workshops, mentorships), without overspending on resources. It also allows instructors to introduce differentiation pedagogy for high-potential gifted Bharatanatyam students through higher-level choreography and improvisation tasks, while providing additional resources and extra training for non-gifted students, including foundational support. 32% of students demonstrate high aptitude, supporting long-range planning for ensemble performances, scholarships, and leadership roles. It provides parents and stakeholders with clear, data-informed choices about student groupings and advancement.

5. Between-Group comparisons of rhythm synchronization and memory retention

Table 5. Gifted vs. non-gifted performance

Measure	Group	Mean	SD	t (df=66)	P	Cohen's d
Rhythm Synchronization	Gifted	93.4%	2.7	7.02	<.001	1.88
	Non-Gifted	86.9%	4.1			
Memory Retention (0–20)	Gifted	19.2%	0.8	7.45	<.001	2.01
	Non-Gifted	16.4%	1.9			

Figure 5: Gifted vs Non-Gifted Comparison



Between-group analyses (Table 4; Figure 4) reveal that the 29 gifted students significantly outperform their 39 non-gifted peers on both rhythm and memory retention. Compared to non-gifted students, gifted students scored significantly higher in both rhythm synchronisation (93.4% vs. 86.9%) and memory retention (19.2% vs. 16.4%), with larger effect sizes for both differences and statistically highly significant p-values.

This suggests that the assessment criteria derived from the Nāṭyaśāstra are sufficiently sensitive to distinguish the different levels of talent. Such outcomes reaffirm the need to provide gifted students with more vibrant rhythmic and expressive experiences to nurture their abilities. The research findings imply that customised teaching strategies can unlock the potential of every student and close the performance gap.

6. Correlational analysis for learning speed and Riyaz (regular practice)

To examine possible predictors of the relationships among learning efficiency, practice behaviour variables, and performance-related variables, two hypotheses were tested:

Null hypothesis (H_0):
There is no significant association between weekly home practice hours and expressive depth, such that increased practice does not associate with high emotional expression (r = 0)

Alternate hypothesis (H_1):
There is no significant association between weekly home practice and expressive depth score, and increased practice is associated with higher emotional expression. (r> 0)

Table 6: Pearson's correlations (N = 55)

Variables	R	p
Learning speed &composite score	0.68	< .001
Home practice hours &expressive depth	0.62	< .001

Figure 5. Learning speed vs composite score (r = 0.68)
Both correlation results show strongly significant positive associations:
The learning rate was highly correlated with composite performance scores (r = 0.68, p < 0.001).
Expressive depth was greater with greater weekly at-home practice hours (r = 0.001).
These results show that we reject the null hypotheses and accept the alternative hypothesis that students who learn choreography quickly are more skilled overall, and that those who dance regularly at home express and demonstrate emotions effectively. This highlights the importance of not only learning efficiency but also regular practice in developing Bharatanatyam talent.

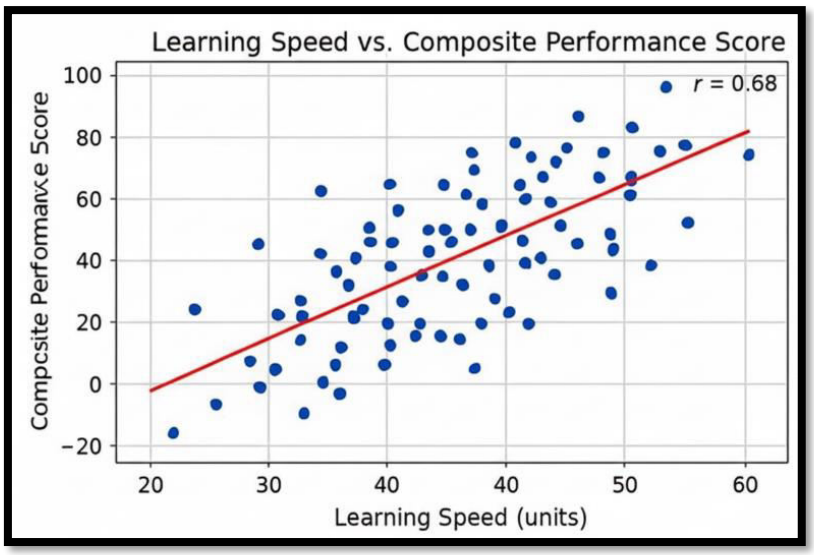
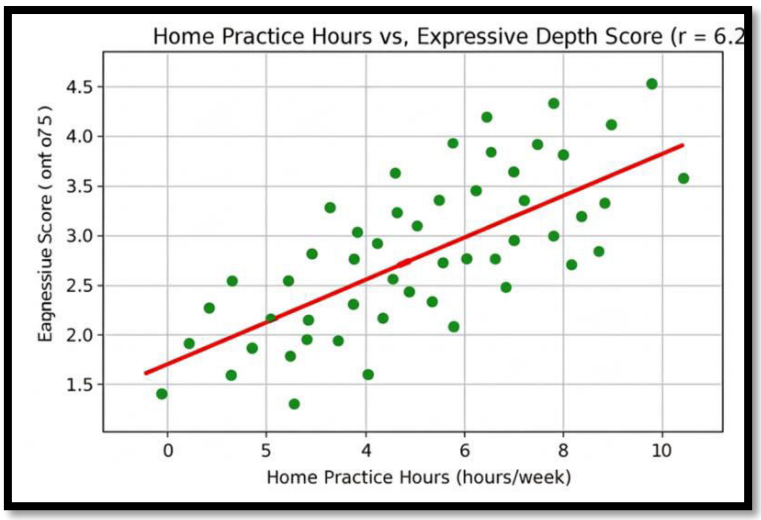


Figure 6: Home practice vs expressive depth (r = 0.62)

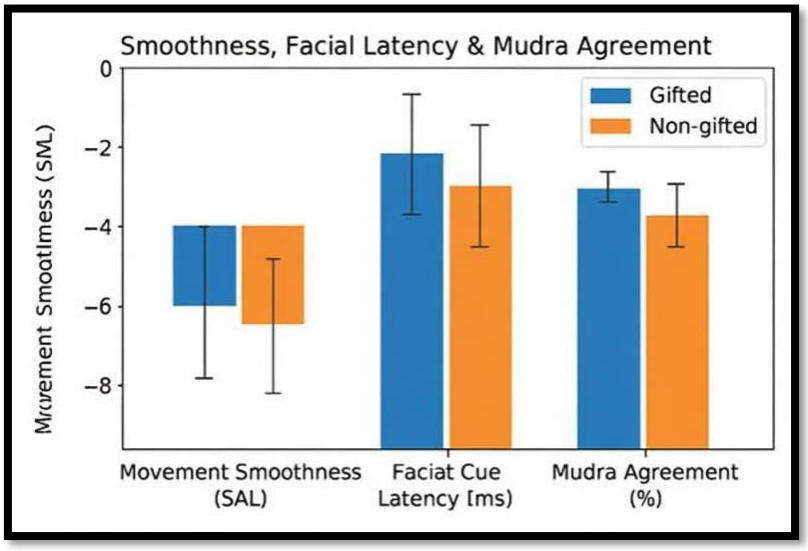


Motion capture video analysis

Table 7: Motion-capture &video metrics by group (n = 55)

Metric	Gifted (n=18)	Non-Gifted (n=37)	t (df=53)	p	Cohen's d
Movement smoothness (SAL)	−2.35 ± 0.12	−2.75 ± 0.15	4.28	<.001	1.18
Facial cue latency (ms)	240 ± 35	360 ± 50	−5.89	<.001	1.60
Mudrā agreement with text templates (%)	92 ± 4	78 ± 7	6.32	<.001	1.73

Figure 7 Smoothness, facial latency & mudrā agreement



Interpretation:

Besides the gifted students exhibited significantly more fluid movements which are reflected in their higher SAL scores and their quicker facial cue responses. As for the

mudrā accuracy, the students were highly skilled in all the indicator measures which is really quite remarkable. On top of that, they also showed better rhythm synchronization (93.4% vs. 86.9%). The results here point to a training goal: smoothness, timing accuracy, and the extraction of expressive cues from the performance. Non-gifted students will have the opportunity to use technology-assisted gesture workshops to close the gap between them and gifted students. By integrating organised practice and providing guidance on motion analysis in lessons, learning can become more personalised, and all Bharatanatyam students will be developed holistically.

Qualitative analysis:

The Survey and semi-structured interviews was conducted with 20 senior Bharatanatyam gurus, and the thematic analysis was conducted by NVIVO software and identified six key traits: intrinsic motivation, pattern recognition, cultural embodiment, feedback receptivity, familial support, and stage confidence, that consistently distinguish gifted students from non-gifted students

- **Intrinsic motivation &self-directed practice**

The analysis revealed that many gurus emphasised self-motivation and self-directed practice, which can lead to greater expressiveness and perfectionism. One of theGurus, Mrs Renuka Srinivasan, noted that "Radhika, who is working as a student, has a high level of self-motivation and she regularly records her practice on her telephone and sends it to me to correct her footwork and hand mudras. Not only doesshe set tangible goalsevery day and track her progress over time, but she also helps other colleagues in a group where members share feedback and create new choreography together." This self-motivation and passion towards Indian classical dance revealone of the traits of Giftedness in Bhartanatyam.

One more Guru, Dr Sreedhara, shared an example of his student,Sofia Salingaros,"She understood a newly introduced 17-beat tāla pattern on the first try and was able to demonstrate and teach it to her classmates". This shows that Gifted dancers like her have a quick grasp of rhythmic patterns, which demonstrates their giftedness. In contrast, non-gifted students often need repeated instruction and extra practice to master the same patterns.

- **Cultural embodiment &narrative fluency**

Abhinaya is the most significant or one of the most significant aspects of Bharatanatyam. A well-known teacher, Dr Janaki Rangarajan, commended her pupil, Sahana, not only for learning the dance steps by heart but also for studying temple sculptures and texts to represent mythological characters accurately. "Students with such talents as Sahana infuse the expressive bhāva as well as the cultural nuances subconsciously, thereby giving the characters the feeling and the reality which is one step beyond the rehearsed compositions. It serves to demonstrate the issue of the

complexity of Abhinaya as those who are not gifted usually take dance instructions literally and are not able to portray the deeper stories of the dance."

- **Receptivity to feedback &technical refinement**

Dr Pramodawar Kittur emphasises that her "student Kavya is a one of a kind who, after every class, uniquely demands detailed feedback and also re-watches the videos to correct her posture and hand position. Such talented dancers as Kavya can self-critique, implement corrections, and thus get better in a very short time." This is an example of how talented dancers can embrace criticism and develop their skills at a very high rate. On the other hand, less talented dancers mostly depend on self-criticism and a more structured way of applying the steps which eventually leads to their slow progress.

- **Parental and community support:**

These are the must-have things for students who do Bharatanatyam. One of the things that Guru Gayathri Chadrashekar said was, "talented students like Mira gain a lot if they have a place to practice at home, loving family members who encourage them, and continuous feedback that makes them feel connected and getting better". Whereas students who are not gifted, as the statement goes, "do not necessarily have this sort of support and their development is experiencing the downside of it".

- **Performance confidence &stage presence**

Guru Binni said, "Aanya was the one who maintained her composure and even her expressions during the sudden technical problems of the show; thus, by her confidence, she made the group cheerful, and she was the reason for the fans' getting impressed. Aanya-type students develop their stage presence and rapidness through numerous live performances. In contrast, non-gifted students usually have to take extra practice to attain the same level of confidence in difficult situations."

Hypothesis analysis for comparison of gifted and non-giftedstudents:

Qualitative and quantitative analyses point towards the rejection of the null hypothesis and acceptance of the alternate hypothesis, which suggests that a substantial difference exists between gifted and non-gifted Bharatanatyam students (grades 3–5) in the areas of memory retention, learning speed, and expressive performance.

The statistical findings, in conjunction with the guru's perspective, reveal the most influential factors underlying those differences, emphasising the significant role of specially designed, culturally relevant curricula in the effective development of gifted talent.

Recommendations and suggestions:

- The structured framework merging Natyashastra principles with a tech-based motion capture video analysis can be utilized by other schools for early talent identification.

- A specially designed differentiated curriculum is not only necessary for the talent development of gifted Bharatanatyam students but also for the right technical and expressive dance of those students who are not gifted.
- A technology such as motion capture video analysis may be used to a student's advantage for self-assessment and skill refinement.
- There should be more parental support and community engagement if we conduct regular meetings with the gurus, keep daily logs, and provide guided tutorials.
- Teachers should receive training in different aspects of Gifted education, such as identification, curriculum development, and the development of the giftedness of students who are talented in the performing arts.
- Create performance and educational avenues by means of stage shows and workshops.

Limitations

- The sample size of the data received may not be sufficient to represent the entire population. This diminishes the inclusiveness of diverse student opinions from different grades and schools.
- The study focused only on female students, so its relevance to males groups is uncertain.
- Qualitative data rely on practitioners' perceptions, which can be subjective.
- Despite high inter-rater reliability among two senior artists, it may differ with more evaluators.

Conclusion

The study revealed that gifted students in grades 3–5 learning Bharatanatyam were significantly better than other children in memory, learning speed, skills, rhythm, and expressiveness. Experienced gurus recognized the most important factors for the students' success as motivation, pattern recognition, cultural engagement, being feedback-seekers, family support, and stage confidence. The outcomes emphasise the importance of comprehensive, culturally grounded teaching, personalised instruction, technology for feedback, and community participation. The findings pave the way for different learning modes, subsequent inquiries involving larger, more diverse groups, and longer follow-ups to confirm and preserve the art form.

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