

Marching Percussion as an Educational Discipline

Why it can become a critical pathway to music, belonging, and growth for the right student



AN EVIDENCE-BASED CASE FOR ACCESS

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Executive summary

Marching percussion is often described as an activity attached to a band program. Educationally, that description is too small. The discipline asks students to make precise, expressive music while coordinating technique, movement, spatial awareness, memory, and attention to an ensemble. Its battery and front-ensemble roles differ physically, but both require students to understand how an individual part functions inside a larger musical system.

The strongest defensible conclusion from the research is not that marching percussion is universally necessary, or that participation automatically improves character. It is that marching percussion can offer a distinctive and unusually powerful pathway into music for students whose engagement is activated by physical learning, visible progress, immediate feedback, shared goals, and an indispensable ensemble role.

That conclusion rests on three levels of evidence:

- 1. Direct evidence from marching band and band settings.** Students, parents, and directors report strong perceived gains in rhythm, technique, expressive control, teamwork, communication, relationships, goal setting, and confidence. Qualitative studies describe band as a setting where trust, acceptance, identity, and belonging can develop. These studies are valuable, but much of the direct evidence is descriptive, correlational, or based on self-report.
- 2. Adjacent evidence from music cognition, motivation, and ensemble learning.** Research shows that bodily action can shape the perception of beat, meter, timing, and musical expression. Motivation research helps explain why competence, autonomy, and relatedness can turn compliance into sustained musical investment. This evidence supports a plausible educational mechanism, but it does not prove that marching percussion causes music appreciation.
- 3. Broader evidence from youth development.** Well-designed programs can improve personal and social outcomes when they use sequenced, active, focused, and explicit instruction and provide safety, structure, supportive relationships, belonging, skill building, and opportunities for young people to matter. This evidence is a warning as much as a promise: soft skills emerge through program design, not merely through membership.

For this paper, **music appreciation** means a durable capacity and desire to notice, understand, value, and return to music. It is not passive liking, and it is not limited to knowing historical facts. Marching percussion can make rhythm, form, balance, dynamics, timbre, and expressive intent tangible because students experience those concepts as actions with audible consequences.

For the right student, this experience can be pivotal. A student who has not connected with music through listening, notation, or a conventional rehearsal may connect when rhythm is physical, improvement is visible, and success depends on other people. In that sense, marching percussion can be

critical without being compulsory: it may be the route through which music first becomes intelligible, social, and personally worth pursuing.

The case for access is therefore educational. A developmentally appropriate marching-percussion program can expand the number of ways a young person is allowed to become a musician. To deliver that promise responsibly, programs should combine musical rigor with qualified instruction, progressive physical demands, hearing and heat protections, constructive feedback, student voice, explicit reflection, and connections to a broader music education.

The central claim

Marching percussion is a distinct, embodied ensemble discipline. For students who respond to physical engagement, precision, interdependence, and immediate feedback, it can become a critical gateway to musicianship, music appreciation, belonging, and the deliberate practice of transferable skills.

What the evidence does and does not support

The evidence supports	The evidence does not establish
Marching percussion integrates musicianship with coordinated physical and visual demands.	That marching percussion is necessary or suitable for every student.
Participants commonly perceive growth in rhythm, technique, expression, teamwork, relationships, and confidence.	That participation alone causes broad academic, cognitive, or character gains.
Movement can influence how people perceive rhythm, meter, timing, and expression.	That embodied learning is the only or best route to music appreciation.
Band ensembles can provide strong belonging, identity, and peer support.	That every ensemble is psychologically safe or inclusive.
Personal and social skills are more likely to develop when instruction is sequenced, active, focused, and explicit.	That soft skills automatically transfer from rehearsal to school, work, or family life.
Marching percussion can address many performance, response, and refinement goals in music standards.	That it supplies the full breadth of a comprehensive music curriculum by itself.

1. More than an activity: a distinct educational discipline

Marching percussion combines domains that are often taught separately. Students must produce a controlled sound, execute rhythmic material, interpret musical structure, listen across an ensemble, respond to visual information, remember sequences, and regulate their bodies in time and space.

Precision in one domain cannot compensate for neglect in another. A correct rhythm played with poor tone, an expressive phrase that does not align with the ensemble, or accurate notes performed without physical control remains incomplete.

The field includes both the **battery**, whose instruments commonly move with the performers, and the **front ensemble**, whose instruments are positioned at the front of the performance area. Winter Guard International describes indoor percussion ensembles as combining marching battery and front ensemble sections in productions that unite music performance, marching, and theater (Winter Guard International, n.d.). The exact instrumentation and degree of movement vary by program, but the educational principle is consistent: each performer is responsible for a specialized part inside a coordinated whole.

That coordination creates a demanding learning environment. Students learn that:

- time must be shared, not merely counted privately;
- technique exists to produce a musical result;
- dynamics and articulation affect the balance and character of the ensemble;
- form is experienced through arrivals, transitions, repetitions, and contrasts;
- visual and physical choices influence sound;
- preparation has consequences for other people.

The National Core Arts Standards frame music learning through creating, performing, responding, and connecting. Ensemble standards ask students to analyze structure and context, interpret expressive intent, refine work through feedback, perform with technical and expressive accuracy, and connect music with personal experience (National Coalition for Core Arts Standards, 2014). Marching percussion can provide a rich laboratory for many of these practices, especially performing, analyzing, interpreting, and refining. It does not automatically provide the full breadth of creating, historical study, cultural context, or independent musicianship. A responsible program treats the discipline as a strong component of music education, not as a substitute for all of it.

This distinction matters. If marching percussion is treated only as entertainment, instruction may focus narrowly on cleaning a show. If it is treated as a discipline, the show becomes a vehicle for teaching transferable musical ideas: pulse, subdivision, phrasing, tone, texture, balance, form, interpretation, and ensemble awareness.

2. How physical music-making can make music meaningful

Music appreciation is sometimes reduced to exposure: hear enough music, learn enough terminology, and appreciation will follow. Exposure matters, but appreciation also grows through agency. A student values music differently after learning how timing changes a phrase, how a timbral choice alters an ensemble texture, or how one entrance can clarify or destabilize an entire musical moment.

Marching percussion makes these relationships unusually concrete. A student does not only hear pulse and subdivision. The student organizes motion around them. The student does not only read a crescendo. The student must coordinate a gradual change in sound with technique, breath, listening, and the contour of the ensemble. Form is not simply labeled on a worksheet. It becomes a sequence of responsibilities, transitions, tensions, and releases that the performer must embody and remember.

Research on music perception offers a credible explanation for why this can matter. Maes and colleagues reviewed evidence that action and bodily movement influence the perception of rhythm, timing, meter, and musical expression (Maes et al., 2014). Experimental studies summarized in that review found, for example, that movement can affect how listeners hear an ambiguous meter and how children perceive expressive character. These studies were not evaluations of marching percussion. They do, however, support the narrower principle that musical understanding is not exclusively abstract or auditory. Perception and action can inform one another.

Marching percussion applies that principle in an ensemble setting. Students repeatedly move through a cycle:

1. attempt a musical and physical task;
2. hear and feel the result;
3. receive feedback from the sound, the ensemble, and the instructor;
4. adjust a specific element;
5. try again within the full context.

This feedback cycle can turn abstract musical language into observable cause and effect. “Play together” becomes a question of shared subdivision, listening location, attack shape, physical preparation, and recovery. “Shape the phrase” becomes a coordinated decision about velocity, height, touch, balance, and direction. Students learn not only what a musical concept is called, but what it does.

Motivation research adds a second mechanism. Self-determination theory proposes that motivation becomes more internalized when people experience competence, autonomy, and relatedness. In music education, those needs help explain why some learners persist and experience music as part of who they are rather than as an obligation (Evans, 2015). A well-designed percussion program can support:

- **competence**, through progressive skills and audible evidence of improvement;
- **relatedness**, through a stable section and shared ensemble goals;
- **autonomy**, through interpretation, self-assessment, leadership, and meaningful choices.

Again, this is a theory-backed explanation, not proof that any given program will produce appreciation. Poorly calibrated difficulty can undermine competence. Controlling instruction can suppress autonomy. Exclusion or humiliation can destroy relatedness. The same features that make the activity intense can deepen engagement or drive a student away, depending on how adults design the experience.

For the right student, however, the combination can be decisive. The student encounters music as something to do, solve, shape, and share. Appreciation grows from participation because listening becomes informed by responsibility. After having to balance a part, sustain time, or clarify an arrival, a student can hear those features in other performances with greater attention.

3. What direct evidence says about musicianship

The direct research base specific to marching percussion is limited. Much of the available evidence concerns marching band or school band more broadly, and many studies rely on participant perceptions. That limitation should be stated plainly. It does not make the evidence useless, but it determines the strength of the claims that can be made.

Carver's 2019 study surveyed 431 students, 331 parents, and 14 directors from 14 central Ohio high school marching-band programs. Eighty-eight students identified percussion as their instrument. Students rated perceived musical benefits most highly in rhythm, technical ability, expressive qualities such as dynamics and tempo, balance and blend, and articulation or stickings. On a five-point scale, mean student ratings for those areas ranged from 4.39 to 4.55 (Carver, 2019).

Those perceptions align closely with the daily work of marching percussion:

- **Rhythm and internal time.** Layered parts require reliable pulse, subdivision, entrance timing, and recovery.
- **Technique and tone.** Repetition makes the relationship between motion and sound visible and coachable.
- **Dynamics and phrasing.** Students must make expressive changes while preserving timing and ensemble balance.
- **Balance and blend.** Individual clarity must serve the texture, not dominate it.
- **Articulation and sticking.** Consistent physical vocabulary supports both precision and expression.

The same study offers an important corrective. Students reported lower perceived benefits in areas such as form, arranging, and composition. Carver concluded that the participating programs did not, by themselves, provide a holistic music education across all standards. The implication is not to diminish marching band. It is to position it accurately: the discipline is particularly strong where performance, refinement, timing, technique, and ensemble synthesis are concerned, and it should be connected intentionally to broader creating, responding, and contextual learning.

Direct evidence should also be interpreted with care. Carver used a purposeful regional sample, reported descriptive results rather than causal estimates, and relied on self-report. The student sample was also predominantly White. The findings show what participants perceived in those programs, not what every student will experience or what marching percussion alone caused.

Even within those limits, the pattern is educationally meaningful. The highest-rated musical areas were not incidental to the activity. They were the capacities most continuously demanded by it. This is a reasonable basis for saying that marching percussion provides concentrated practice in rhythmic, technical, expressive, and ensemble skills.

4. Soft skills: practiced through the work, not granted by membership

Claims about “soft skills” often outrun the evidence. Music programs are sometimes credited with producing discipline, leadership, confidence, teamwork, perseverance, and academic success as if these outcomes appear automatically. They do not.

One school-based study by Rickard, Bambrick, and Gill found no convincing evidence of widespread cognitive or psychosocial benefits after roughly six months of additional music instruction compared with drama or art activities (Rickard et al., 2012). That result does not show that music lacks value. It shows why advocates should avoid promising broad, automatic effects.

A more precise case begins with the tasks students repeatedly perform. Marching percussion can create authentic situations in which personal and social skills are necessary:

Practice demand	Skill being rehearsed	Condition for broader transfer
Prepare an individual part before ensemble rehearsal	Responsibility and self-management	Clear expectations, achievable milestones, and reflection on preparation choices
Match timing, sound, and motion with a section	Teamwork and communication	Listening routines, peer feedback norms, and shared problem solving
Repeat difficult material after errors	Persistence and emotional regulation	Specific feedback, visible progress, rest, and challenge calibrated to readiness

Practice demand	Skill being rehearsed	Condition for broader transfer
Adjust when spacing, tempo, equipment, or personnel changes	Adaptability and attention	Practice with variation, debriefing, and permission to recover from mistakes
Give and receive correction	Humility, confidence, and interpersonal skill	Feedback aimed at behavior and sound, never personal worth
Lead a subsection or rehearsal process	Leadership and service	Rotating roles, coaching, accountability, and adult support
Perform an indispensable part in public	Courage and reliability	Psychological safety, adequate preparation, and developmentally appropriate stakes

The difference between **rehearsal** and **transfer** is essential. A student may act responsibly in percussion because the consequence is immediate and the peer group matters. Applying that responsibility to homework, employment, or family life requires the student to recognize the pattern and choose it in a new context. Instructors can support that bridge by naming the skill, asking students to reflect on it, and giving them opportunities to apply it beyond a single drill.

Carver's participants perceived strong social benefits. Student ratings were highest for teamwork, communication and interaction, positive relationships, understanding limitations and strengths, goal setting, and self-confidence. Teamwork received a mean rating of 4.50 on a five-point scale, and friendship was the most prominent theme in student narrative responses (Carver, 2019). These findings are consistent with the structure of an interdependent ensemble, but they remain perceptions rather than causal proof.

The wider youth-development literature clarifies how programs can make such outcomes more likely. Durlak, Weissberg, and Pachan's meta-analysis of 75 after-school programs found positive effects in programs that intentionally targeted personal and social skills. Effective programs were distinguished by four practices summarized as SAFE: activities were sequenced, active, focused, and explicit (Durlak et al., 2010).

Applied to marching percussion, SAFE means:

- **Sequenced:** teach collaboration, leadership, and self-management progressively rather than expecting instant maturity.
- **Active:** let students rehearse communication, decision-making, peer coaching, and recovery in authentic tasks.
- **Focused:** reserve time to work on these skills instead of treating them as accidental byproducts.

- **Explicit:** name the skill, define what it looks like, provide feedback, and ask students to reflect on its use.

The educational claim is therefore stronger when stated narrowly: marching percussion offers repeated, consequential practice in soft skills, and well-designed instruction can help students understand and transfer that practice. The activity supplies the laboratory. Program culture and pedagogy determine what is learned there.

5. Belonging, identity, and the experience of mattering

Ensemble music is social before it is symbolic. Students enter a network of listening, cueing, adjusting, relying, and being relied upon. In percussion, this interdependence is especially audible. A missing or inconsistent part can alter the ensemble's timing, texture, and energy. When handled constructively, that responsibility tells a student, "Your preparation matters because your presence matters."

Qualitative research helps illuminate this experience. Dagaz studied band programs at two Midwestern high schools through observations and in-depth interviews. Students described close-knit communities characterized by trust, acceptance, peer support, and growing self-confidence (Dagaz, 2012). The findings should not be generalized to all programs, but they show how ensemble culture can become an important social world within a school.

More recent quantitative research found that high school band students in a Pacific Northwest sample reported a greater sense of belonging in band than in their schools outside band (Siegal, 2024). Because the study was correlational and concerned band broadly, it cannot establish that band caused belonging or that the result applies specifically to percussion. It does support the proposition that an ensemble can be a distinct belonging context rather than merely another class period.

Belonging is not the same as conformity. Healthy belonging combines acceptance with contribution. Students need a place in the group, but they also need opportunities to exercise agency, develop competence, and be known beyond their performance output.

The National Research Council and Institute of Medicine identified common features of settings that promote positive youth development: physical and psychological safety, appropriate structure, supportive relationships, opportunities to belong, positive social norms, support for efficacy and mattering, skill building, and integration with family, school, and community (National Research Council and Institute of Medicine, 2002).

This framework offers a practical test for marching-percussion programs. A disciplined rehearsal is not automatically a positive youth-development setting. High standards can coexist with safety, dignity, and student voice. They can also be distorted into fear, hazing, public humiliation, or excessive control. The

measure is not whether the program feels intense. It is whether intensity serves learning while preserving the student's physical and psychological safety.

6. Why “the right student” matters

No single mode of music learning will reach every student. Some learners thrive in solitary practice, notation-centered study, improvisation, composition, technology, choir, strings, concert band, or informal music-making. Some find marching percussion's volume, repetition, physical demand, correction, or public performance aversive. Access should expand choice, not create a new hierarchy in which one form of musicianship is treated as more authentic than another.

“The right student” is therefore not a fixed demographic category. It is a match between a learner and a set of educational affordances. Marching percussion may be especially compelling for a student who:

- learns readily through coordinated action and immediate sensory feedback;
- is motivated by visible progress toward specific goals;
- values a stable peer group and shared responsibility;
- enjoys precision, repetition, performance, and problem solving;
- needs a concrete role before developing confidence in a larger musical identity;
- has not yet found conventional music learning personally meaningful.

These are not eligibility requirements, and they should not become stereotypes. A quiet student can become a strong performer. A beginner can develop precision. A student who initially resists repetition may discover satisfaction in mastery. The relevant question is not “Does this child look like a percussionist?” It is “Does this learning environment reveal motivation, attention, or musical understanding that other settings have not yet reached?”

For such a student, calling marching percussion **critical** can be justified in a practical, not universal, sense. The claim is not that the discipline is indispensable to human development. It is that a particular student may need this combination of physicality, structure, interdependence, and performance before music becomes personally significant.

This is a claim about access and fit. Schools and communities often offer marching percussion only after students have already navigated auditions, fees, transportation, equipment, prior instruction, or the culture of a competitive program. A developmentally appropriate entry point can let students discover the fit before those barriers decide for them.

7. Conditions for a high-quality program

The educational value of marching percussion depends heavily on how the experience is designed. A strong program should be able to answer not only “What will students perform?” but also “What will they understand, how will they grow, and how will we know?”

7.1 Teach music, not only the product

Repertoire should be a vehicle for transferable concepts. Instructors should connect sticking and touch to tone, counts to phrase and form, repetition to diagnosis, and ensemble cleaning to listening and shared time. Students should encounter language and ideas they can carry into concert ensembles, private practice, composing, listening, and future performances.

7.2 Match challenge to development

Difficulty should rise progressively. Students need early success, clear models, manageable chunks, and multiple ways to demonstrate learning. Repertoire that is impressive but chronically out of reach can produce imitation, tension, and dependency instead of understanding.

7.3 Make personal and social learning explicit

Use the SAFE principles. Teach preparation routines. Establish norms for feedback. Rotate age-appropriate leadership. Debrief mistakes and performances. Ask students where the same habits may matter elsewhere. Assess collaboration and self-management with the same specificity used for rhythm and technique.

7.4 Protect physical and psychological safety

Marching music involves meaningful physical and sound exposure. Research in collegiate marching-band settings has documented musculoskeletal injury risk during band camp and potentially hazardous sound exposure, supporting the need for prevention rather than complacency (Jin et al., 2013; Moffitt et al., 2015). A youth program should include:

- progressive conditioning and instrument-load decisions appropriate to age and body;
- planned hydration, shade, rest, and heat procedures;
- hearing-conservation education and properly fitted protection;
- equipment checks and instruction in safe movement and lifting;
- clear anti-hazing and anti-harassment rules;
- correction that is specific, respectful, and free of humiliation;

- a process for reporting pain, overload, exclusion, or unsafe conduct without retaliation.

These studies do not provide a universal injury rate for all marching percussion. They establish that the risks are real enough to require deliberate safeguards.

7.5 Build belonging without making belonging conditional

Students should be valued as people while being held accountable as musicians. Attendance, preparation, and contribution matter, but mistakes should not threaten membership or dignity. Instructors should notice isolation, make peer support teachable, and create meaningful roles at more than one level of experience.

7.6 Provide student voice and real responsibility

Autonomy does not require abandoning structure. Students can set goals, assess recordings, propose solutions, lead warmups, mentor peers, help define section norms, and make bounded interpretive choices. These practices convert compliance into ownership.

7.7 Connect the experience to a wider musical life

Students should listen to excellent performances, compare interpretations, learn the origins and contexts of repertoire and practices, create short rhythmic ideas, and connect marching technique with other percussion and ensemble settings. This addresses the limits visible in direct marching-band research and helps ensure that performance competence becomes musical understanding.

8. Implications for schools and community partners

A school or community partner evaluating marching percussion should ask a broader question than whether students can produce a successful performance. The more important question is whether the program creates an accessible pathway into sustained music learning.

That pathway can serve several educational purposes:

- **An entry point.** Students can encounter ensemble music through action, rhythm, and peer interdependence.
- **A bridge.** Beginners can learn rehearsal language, preparation habits, ensemble awareness, and physical fundamentals before entering a more demanding season or school program.
- **A laboratory.** Musical concepts become audible, visible, and revisable in real time.
- **A belonging context.** Students can become known through contribution and develop a stable peer identity.

- **A youth-development setting.** Personal and social skills can be deliberately taught through authentic musical work.

These purposes do not require an elite or relentlessly competitive model. Competition can motivate some students, but educational rigor comes from clear standards, purposeful feedback, thoughtful repertoire, and meaningful performance. A community-based program can preserve high expectations while reducing barriers related to prior experience, auditions, cost, transportation, or school enrollment.

Partnerships are strongest when roles are explicit. Schools can contribute curricular continuity, facilities, referrals, and connections to existing music programs. Community organizations can create flexible entry points, specialized instruction, mentorship, equipment access, and performance opportunities. Families can contribute knowledge of the student, reinforce safety and preparation, and help programs recognize barriers early.

Evaluation should match the claims. A program that promises musicianship, belonging, and soft-skill practice should measure more than attendance and applause. Useful indicators include:

- growth in rhythm, technique, tone, listening, expression, and musical vocabulary;
- student retention and voluntary continuation in music;
- self-assessment and instructor assessment of preparation and collaboration;
- students' reported belonging, safety, agency, and confidence;
- participation and outcomes examined across income, race, gender, disability, school, and prior experience where lawful and appropriate;
- family and school-partner observations, treated as complementary rather than definitive evidence;
- safety incidents, hearing-protection practice, and responses to physical concerns.

No single measure proves that the program caused a life outcome. Together, these indicators can show whether the educational mechanisms described in this paper are present and whether students are experiencing them equitably.

9. Implications for NOVA

The evidence in this paper does not establish that marching percussion benefits every student or that participation alone produces transferable life skills. It does, however, identify the conditions under which marching percussion can become a meaningful educational pathway.

For NOVA, those findings create a practical standard. Its programs should:

- provide rigorous, developmentally appropriate percussion instruction;
- welcome students who may not yet have access to advanced marching-percussion training;

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- complement, rather than replace, school-based music education;
 - use progressive physical demands and explicit hearing, heat, and injury protections;
 - cultivate belonging without making conformity a condition of participation;
 - teach reflection and transfer deliberately when developing responsibility, communication, persistence, and leadership;
 - evaluate musical growth, student experience, retention, safety, and continued engagement with music.

NOVA's role is therefore not to promise that marching percussion will transform every student. It is to create the conditions in which the right student can discover whether this form of music-making speaks to them.

For some, marching percussion will deepen an existing musical identity. For others, its combination of rhythm, movement, repetition, ensemble responsibility, and shared performance may make music meaningful in a way that other opportunities have not. Providing a credible opportunity for that discovery is the educational case for NOVA.

Conclusion

Marching percussion deserves to be recognized as an educational discipline because it integrates musical knowledge with technique, action, perception, ensemble coordination, and performance responsibility. Its greatest value is not spectacle. It is the way the discipline makes musical relationships consequential and gives students repeated opportunities to hear, feel, analyze, adjust, and contribute.

The evidence requires restraint. Direct studies are limited and often based on self-report. Adjacent research explains plausible mechanisms but does not prove marching-percussion-specific effects. Music participation does not automatically create broad cognitive or psychosocial gains. Soft skills do not transfer simply because they were needed in rehearsal.

Within those boundaries, the case remains strong. Students and educators report concentrated growth in rhythm, technique, expression, teamwork, relationships, goal setting, and confidence. Research on action and perception supports embodied routes to musical understanding. Studies of band settings show that ensembles can become powerful contexts for belonging and identity. Youth-development research shows how intentional program design can convert demanding activity into personal and social learning.

The responsible conclusion is conditional and compelling: when taught well, marching percussion can be a critical pathway for the right student. It can make rhythm understandable, effort audible, responsibility relational, and music worth returning to.

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Evidence note

This paper distinguishes direct evidence about marching band or band settings from adjacent evidence about music cognition, motivation, ensemble learning, and youth development. “Can,” “may,” and “is consistent with” are used intentionally where causal or marching-percussion-specific evidence is not available. The paper does not rely on claims about standardized test scores, intelligence, or generalized academic achievement.