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Exploring perceptions of success in Olympic competitive and amateur street and park skateboarding and implications for training

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Abstract

In competitive street and park skateboarding, judges determine success based on an 'overall impression' of each skater's performance, guided by World Skate criteria. Despite different competition formats, the judging criteria for both street and park disciplines are the same, developed on the values, principles, and virtues held within the skateboarding community. Given skating's recent Olympic debut, understanding what specifically constitutes success would seem paramount for skaters to target progression in the sport. To assess if the skateboarding community understands and aligns on judging competitive success criteria, and train accordingly, 33 skaters of various skill levels and disciplines completed a 35-question online survey. Participants included elite (i.e., sponsored, n = 4), regional (New Zealand) amateur (n = 10), and recreational (n = 19) skaters. A mixed-methods, cross-sectional approach revealed that community perspectives on competitive and recreational performance generally aligned with World Skate judging criteria, emphasizing 'flow' and 'style'. Competitive skaters appeared to adjust their training accordingly, however, views on the scale and order of importance of judging criteria vary by involvement, skill level, and discipline, suggesting that an overall impression of skateboarding performance is highly individualistic and ambiguous. This likely leaves coaches and athletes speculating about what constitutes a winning performance and compromises targeted training. The survey's findings, though limited in their scope, emphasize the need for clarity in subjective judging criteria and application. Future research should implement objective explorations of street and park competitive skateboarding performances, respectively.

Keywords

Action sports, subjective judging criteria, performance analysis

Introduction

Competitive street and park skateboarding was introduced as an Olympic sport at the Tokyo 2020 games, continued in the Paris 2024 games and has been approved for the Los Angeles 2028 games.[1] Competition success is the result of combining subjectively determined scores by judges, who form a single score based on the 'overall impression' of a skater's performance.[2,3] Although defined and publicly available, the criteria for ranking performance can be perceived as relatively vague and ambiguous. Moreover, due to the recency of Olympic inclusion, the format of the competitions continues to evolve, for example, the scoring format of street skateboarding in Paris 2024 ("2-5-3" on a 100-point scale)[2] was changed following feedback on the Tokyo 2020 format ("2-5-4" on a 10-point scale).[3] Understanding what constitutes a better overall performance is of interest to those wanting to train and compete.

Despite format changes, the judging criteria for skateboarding has remained consistent throughout its Olympic

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presence. In competition, judges award points based on criteria developed by the skateboarding governing body, World Skate. The World Skate judging criteria (Figure 1) was created 'to foster and preserve the progression of skateboarding while highlighting the importance of creativity and originality" in a competitive environment. This includes (1) difficulty and variety of tricks, (2) execution, (3) use of course and featured obstacles, (4) flow and consistency, and (5) repetition; developed specifically to encompass the "values, principles, and virtues generally shared and accepted by skateboard communities".[2] Although some of these criteria likely have an objective basis through which performance might be quantified, targeted, and improved, judging ultimately occurs through subjective lenses. Moreover, no research exists to explain the tactical demands of the competitive environment.[4] Therefore, what ultimately constitutes judges' impressions and distinguishes competitive performance in elite street and park skateboarding is unexplored. For amateur skaters looking to progress in the sport to compete at the highest level, they need to focus their training effectively, which requires an accurate understanding of what it takes to be successful in the eyes of the judges.[5]

Although the judging criteria were developed to reflect the community values, ironically, the incorporation of skateboarding in the Olympics contrasts with the sport's traditionally anti-mainstream ethos.[6] As such, skateboarders have expressed concern that decision-makers may lack core values of the community.[7] Moreover, the specific community of World Skate 'elite competitive' skaters has only come into existence since Olympic inclusion,[8] warranting further exploration into how this community's values align with World Skate judging criteria and the wider recreational community. Along similar lines, street and park disciplines are currently judged using the same criteria; yet competition formats are different,[2] with few skaters competing in both (https://www.worldskate.org/skateboarding/ranking-paris-2024.html, accessed: 3 July 2024). Understanding current perspectives on performance in skateboarding, and how they differ across athlete skill levels, is a crucial first step in determining whether the broader elite and amateur skateboarding communities fully comprehend the criteria that define their success and align their development priorities accordingly. Moreover, due to the notable differences in competition formats and skateboarding styles, whether these perspectives vary between disciplines is of additional interest.

Therefore, this study explores the understanding of skateboarding performance within the athlete community, focusing on how skaters perceive the criteria used to evaluate their performance and whether their training aligns accordingly. Through an online survey, this research aims to describe skaters' perceptions of what constitutes a 'good' performance in competitive and recreational skateboarding and synthesise these insights with the current performance criteria established by World Skate. Furthermore, it compares the opinions of street and park skaters and examines whether perspectives differ by skill level (professional international elite vs. regional amateur) or form of involvement (competitive vs. recreational).

Methods

Experimental approach to the problem

In this cross-sectional study, competitive domestic and international skateboarders were invited to complete an online anonymous survey to capture their perspective on what constitutes a 'good' competitive skateboarding performance. Skaters recruited through social media and word-of-mouth were directed to a Google form (survey) which was open from 10 May 2023 until 1 January 2024. A mixture of random and convenience (pre-existing network) sampling was utilised to boost participant recruitment. From the data collected, mixed statistical methods were used to describe and compare perceptions between disciplines (street vs. park), forms of involvement (competition vs. recreational), and competitive skill level (elite vs. amateur competitors).

Participants

Subjects of all age, sex, and nationality could access and complete the online survey. New Zealand based skateboarders were recruited through social media with an advert including a link to the Google Form. Additionally, elite sponsored international skateboarders were deliberatly recruited via word of mouth to ensure representation across varying levels of involvement within the sport, despite the expectation of limited sample sizes. Due to the primarily descriptive nature of the study and the anticipated challenges in achieving a larger sample size, no formal power analysis was conducted prior to data collection. The original design focused on descriptive outcomes, with any subsequent comparative analyses being exploratory in nature. Thus, the sample size was determined by practical considerations, including participant accessibility, and the novelty of the research context.

Recruitment adverts were posted to online platforms. Additionally, the survey was shared via email to pre-existing networks to ensure participants were from the elite community. Information sheets describing the objectives and purpose of the study were included as the first page of the online survey. Participants were advised that progressing past the information page and submitting a response constituted consent to participate, and they were able to exit the survey, without submitting, at any time. Institutional ethics approval was granted by the Auckland University of Technology Ethics Committee (AUTEC #22/248).

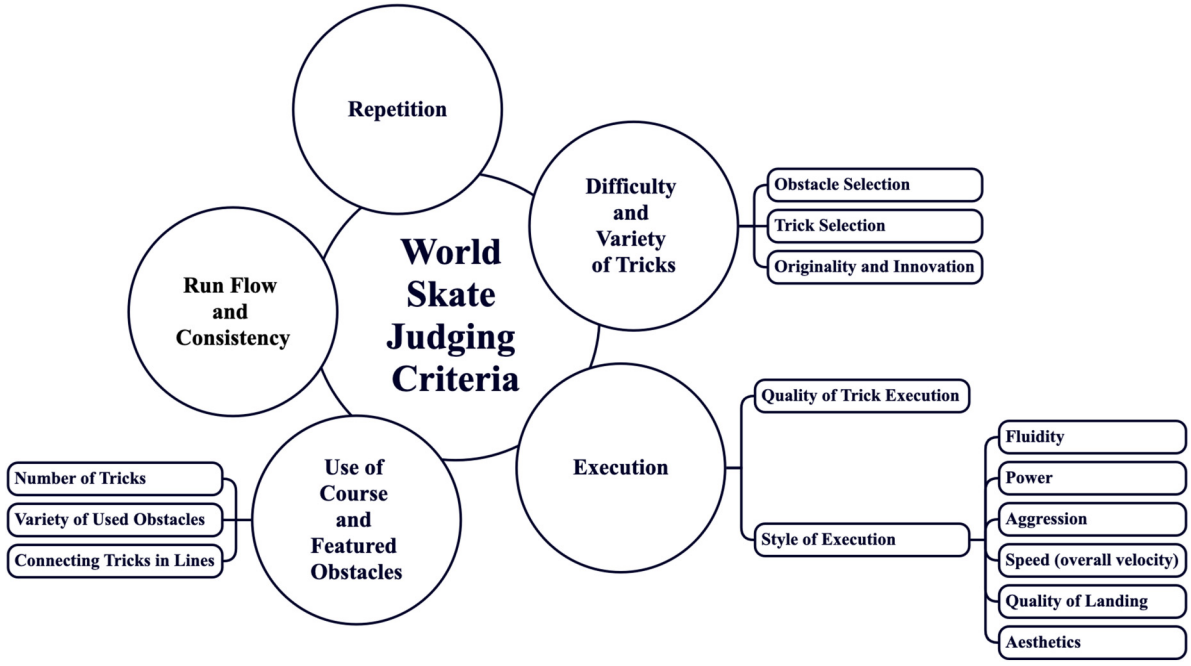

Figure 1. Visual representation of the World Skate judging criteria for street and park skateboarding; adapted from the World Skate Judging Criteria Bulletin 2022.[2]

Procedures

Participants were asked to answer 35 questions, across 6 sections (Supplementary Information). Section 1 contained demographic (age, sex, nationality, residence) and skateboarding background questions (preferred stance, years of experience, preferred discipline, time spent currently skateboarding, current competing status). In addition, they were asked what success in skateboarding looked like to them from a predetermined list (winning competitions, representing their country, peer approval, etc.), selecting all that applied. Section 2 questions pertained to competitive experience (highest and current World Skate rank, first competition, number of competitions in the last year, highest level of competition) and coaching. In Section 3, skaters were asked to rank a list of World Skate judging criteria (Figure 1 and Table 1) by importance to competitive skateboarding performance and to select the most important factor to being the best competitive skater (in their opinion). Responses were recorded on a 5-point Likert scale (1-Not at all Important, 2-Low Importance, 3-Neutral, 4-Important, 5-Very Important).[9] Next, participants were asked whether they felt their answers differed for recreational skateboarding (e.g., skating for fun). If participants indicated 'yes', they ranked the factors again based on recreational skating (Section 4). Notably, all participants answered questions regarding both competitive and recreational skateboarding, regardless of involvement level. In Section 5 participants selected which judging criteria they focused on when training to improve their skating performance (fun/competition, ticking all that applied). Lastly, in Section 6 participants responded if they used any technology or data to inform and guide their training and/or performance. Although participants completed all sections, Section 6 was not analysed or reported on in this study. No free-text responses were included in the analysis.

Data processing

All responses were downloaded in csv format to be used for statistical analysis, conducted in R Statistical Software (RStudio Team (2020). RStudio: Integrated Development for R. RStudio, PBC, Boston, MA URL http://www.rstudio.com/, R base version 4.1.2). *Tidyverse* (version 1.3.2)[11] was used to clean and visualise the data, and the *likert* package (version 1.3.5)[12] was used to analyse and visualise responses to Likert questions (Sections 3 and 4). Visualisation of Likert questions (Figures 2, 3, and 5) display percentages from left to right representing the percentage of participants that reported Not all important or low importance (1 of 2), neutral (3), and important or very important (4 or 5), respectively. The horizontal axes (0%, 50%, 100%) represent the percentage of values to the left and right of the centre line (0%), respectively, whilst splitting the neutral responses in half; left: neutral (3, half), low importance (2), or not at all important (1), and right: neutral (3, half), important (4), or very important (5).

Statistical analyses

To describe perspectives of the skateboarding community on competitive and recreational performance factors, a

Table 1. Ranking of factor importance for competitive and recreational skateboarding. Performance factors included in the survey encompass various World Skate judging criteria,[2,3,10] indicated by 'X'.

	World Skate Judging Criteria[b]				
Performance Factors[a]	Repetition	Trick Difficulty and Variety	Execution	Course and Obstacle Use	Flow and Consistency
Trick Difficulty		X			
Trick Variety	X	X			
Obstacle Difficulty		X		X	
Obstacle Variety	X			X	
Trick Originality	X	X			
Quality of Trick Start ("pop")			X		
Quality of Trick Landing ("bolts")			X		
Style			X		
Trick Fluidity			X		
Power			X		
Aggression			X		
Aesthetics			X		
Speed		X	X		
Height		X	X		
Distance (grind time, air time, etc.)		X	X		
Number of Tricks Performed (e.g., during a run)				X	X
Number of Obstacles Used (e.g., during a run)				X	X
Linking Tricks (e.g., during a run)				X	X
Flow					X

[a]Factors were derived to encompass a range of World Skate Judging Criteria.
[b]See World Skate Judging criteria (Figure 1).

mixed-methods approach was utilised, which involved a variety of descriptive frequency and qualitative analysis of responses. Where appropriate, additional comparative analyses were used. Specifically, we performed non-parametric tests to compare the opinions of competitive street (COMP-STREET) and park (COMP-PARK) skaters and examine if their skill levels (professional international elite, ELITE-COMP vs. regional amateur, AMT-COMP) and forms of involvement (competitive vs. recreational, AMT-REC) related to their responses. Fisher's exact test was used to determine if there were statistically significant differences in responses to dichotomous dependent variables ('Do your answers to competitive skateboarding differ from recreational, yes or no?') across skill-level (ELITE-COMP, AMT-COMP, AMT-REC (adjusted p-value)) and discipline groups (COMP-STREET, COMP-PARK). Fisher's exact test was chosen due to the presence of expected cell counts less than five in the contingency tables, providing a more accurate assessment for small sample sizes and violating the assumptions of other common tests. Mann-Whitney tests (via the W statistic) were used to determine if there were differences in responses between groups for ordinal dependent variable types (level of importance of factors) and interpreted via the effect size (r): $0.10 \leq r < 0.30$ – small effect, $r = 0.30 \leq r < 0.50$ – medium effect, and $r \geq 0.50$ – large effect. Alpha level was set at $a = 0.05$.

Results

Participants

Forty-five skaters submitted responses. Responses from participants who were either not actively skating at least once per month (n = 8), not a street or park skater (n = 3 downhill or longboard), or completed less than 90% of the survey (n = 1) were excluded. Once exclusion criteria were applied, 33 responses remained for analysis.

Of the 33 participants included in the analysis, 14 were competitive (Table 2). ELITE-COMP skaters were from four different countries; three of which competed at the Tokyo 2020 Olympic games, and all four competed in World Skate qualifying competitions for the Paris 2024 Olympic games. All 29 AMT skaters were from or residing in New Zealand at the time they completed the survey. Competitive skaters reported skating at least a few times per week, with 3/4 ELITE-COMP and 4/10 AMT-COMP skating every day for >30 min. All ELITE-COMP participants previously competed in over 20 competitions and had competed for at least 13 or more years. Seven AMT-COMP skaters (70%) previously competed in 10 or fewer competitions; of which six had their first competition after the Tokyo Olympics [within three years prior to completing the survey (2020–2022)].

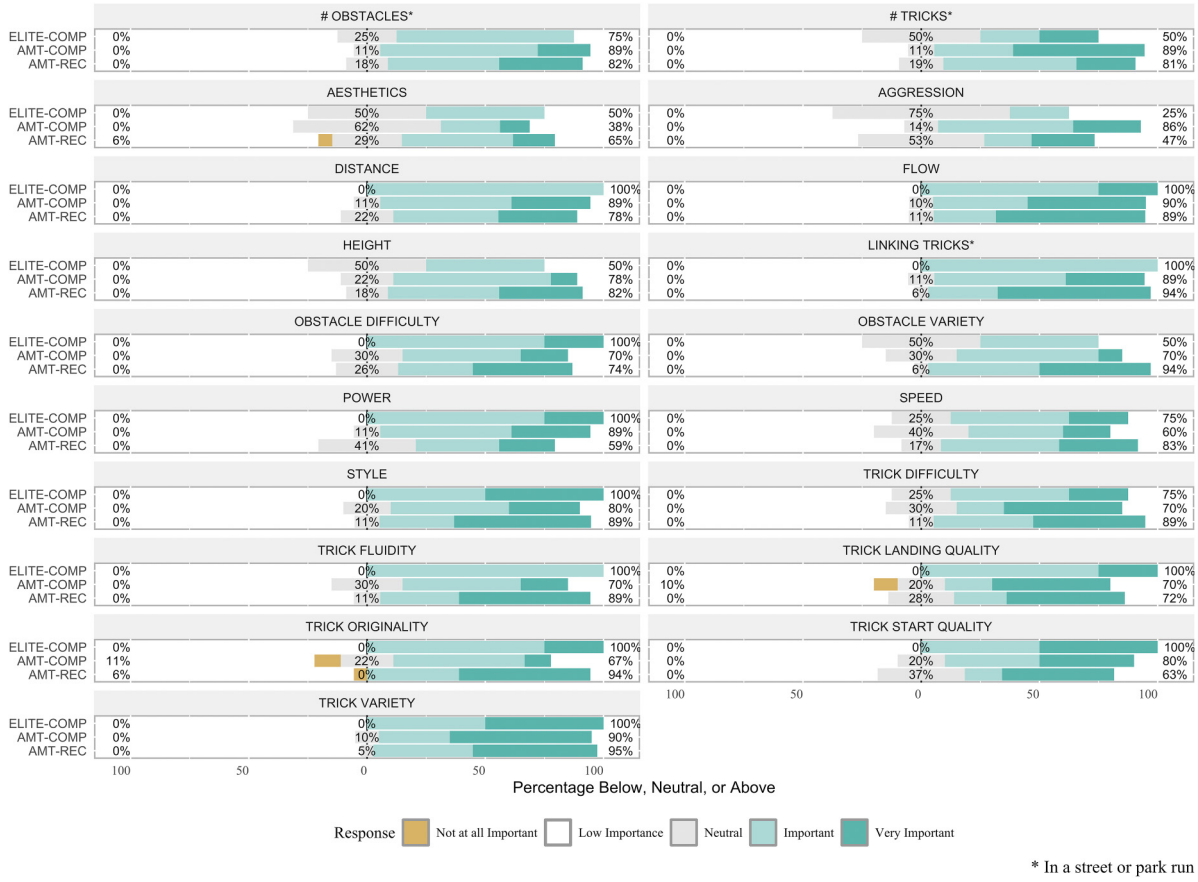

Figure 2. Overall factors and importance level for competitive performance in skateboarding. Responses are grouped by skill; elite (ELITE) or amateur (AMT), and involvement level: competitive (COMP) or recreational (REC). Responses were given on a 5-point Likert scale (1 - Not at all Important, 2 - Low Importance, 3 - Neutral, 4 - Important, 5 - Very Important). Percentages from left to right represent the percentage of participants that reported the factor as Not at all important or low importance (1 or 2), neutral (3), and important or very important (4 or 5), respectively. The horizontal axis (0%, 50%, 100%) represents the percentage of values to the left and right of the centre line (0%), respectively, whilst splitting the neutral responses in half; left: neutral (3, half), low importance (2), or not at all important (1), and right: neutral (3, half), important (4), or very important (5).

Competitive skateboarding performance

Overall, COMP and REC participants concurred World Skate criteria were important or very important to competitive skateboarding performance (Figure 2). More than 90% of participants reported trick variety, linking tricks, and flow as important or very important to competitive success. The lowest importance was placed on aggression, with 46% neutral regarding competitive success.

Of the entire sampled population, the most frequently selected criteria considered as 'most important' to competitive skateboarding performance were style (n = 9, 0% ELITE-COMP, 20% AMT-COMP, 36.8% AMT-REC) and flow (n = 7, 25% ELITE-COMP, 40% AMT-COMP, 10.5% AMT-REC). COMP skaters selected five different factors (out of 19) that were most important for competition success; flow with the greatest number of responses (n = 5, 35.7% of COMP). REC participants selected nine different factors: the most for style (n = 7, 36.8% of REC). Each ELITE-COMP skater selected a different factor (trick difficulty, flow, linking tricks, and trick variety). AMT-COMP skaters selected flow (n = 4), trick difficulty (n = 2), style (n = 2), linking tricks (n = 1), and trick variety (n = 1) as the most important. COMP-PARK skaters felt flow was the most important (n = 4, 50% of COMP-PARK), compared to one of six (16.6%) COMP-STREET skaters.

There was a statistically significant difference, with a small effect, between REC and COMP groups in the level of importance of obstacle variety ($W = 55.5$, $p = 0.01$, $r = 0.209$), trick originality ($W = 64.5$, $p = 0.02$, $r = 0.242$), fluidity ($W = 74$, $p = 0.03$, $r = 0.278$), and linking tricks ($W = 66.5$, $p = 0.04$, $r = 0.25$) (Figure 2). Obstacle variety was important or very important to 50% of ELITE-COMP participants, compared to 70% of AMT-COMP, and 94% of the AMT-REC, respectively. Originality was important or very important to 100% of ELITE-COMP, compared to 67% of AMT-COMP participants. AMT-COMP and

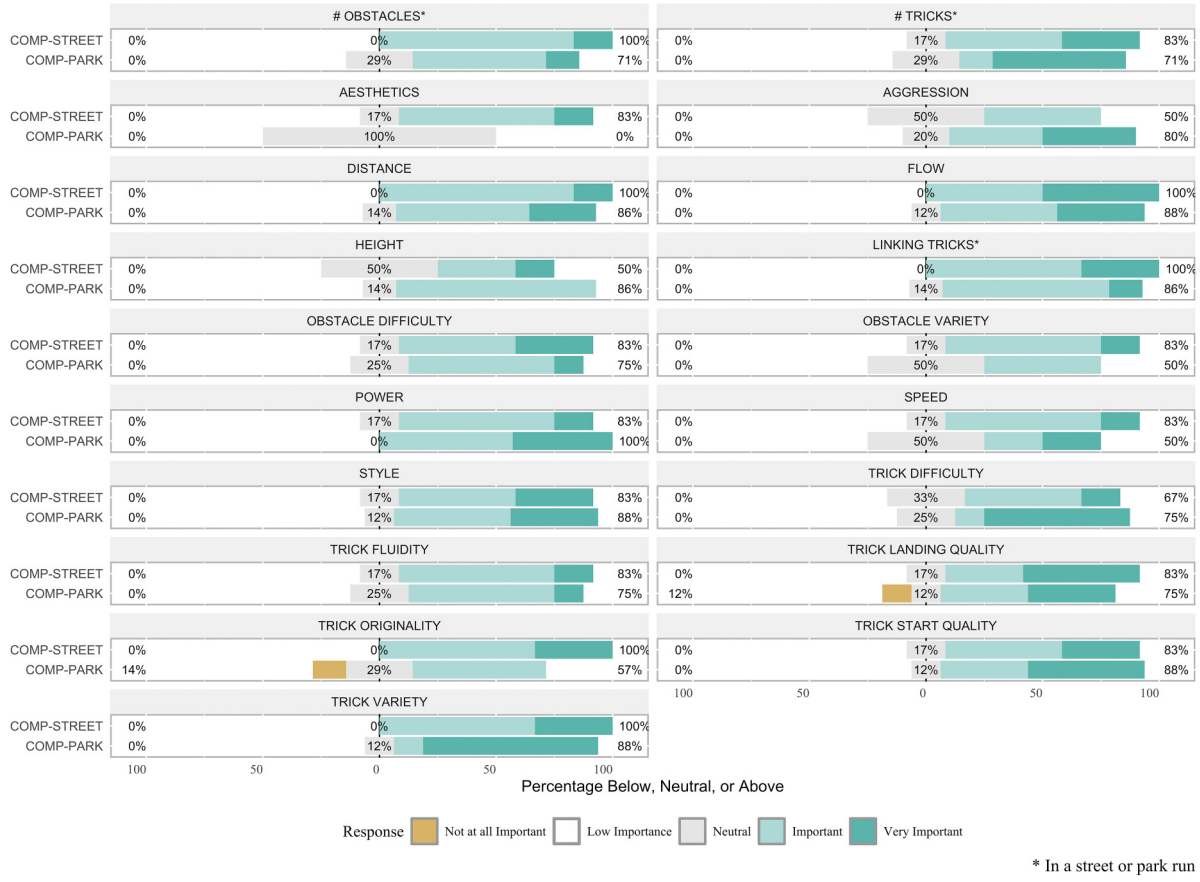

Figure 3. Overall factors and importance level for competitive performance in skateboarding by competitive discipline (COMP-STREET vs. COMP-PARK). Responses were given on a 5-point Likert scale (1 - Not at all Important, 2 - Low Importance, 3 - Neutral, 4 - Important, 5 - Very Important). Percentages from left to right represent the percentage of participants that reported the factor as Not at all important or low importance (1 or 2), neutral (3), and important or very important (4 or 5), respectively. The horizontal axis (0%, 50%, 100%) represents the percentage of values to the left and right of the centre line (0%), respectively, whilst splitting the neutral responses in half; left: neutral (3, half), low importance (2), or not at all important (1), and right: neutral (3, half), important (4), or very important (5).

AMT-REC skaters significantly differed on the importance of obstacle variety ($W = 44.5$, $p = 0.03$, $r = 0.234$) and trick originality ($W = 38$, $p = 0.02$, $r = 0.2$).

There was a statistically significant difference between COMP-STREET and COMP-PARK groups in the importance level of aesthetics ($W = 3$, $p = 0.01$, $r = 0.062$) and trick originality ($W = 8$, $p = 0.04$, $r = 0.167$) to overall competitive performance (Figure 3); COMP-STREET placing more importance on both. Although not statistically significant, COMP-PARK participants reported higher importance on trick and obstacle difficulty, height, and power, but lower importance on obstacle variety and trick originality compared to COMP-STREET.

Training for performance

When training, skaters most indicated flow ($n = 30$) and style ($n = 29$) as their focus (Figure 4). Seven out of the 33 skaters (21.2%) focused on aggression in training. All ELITE-COMP indicated a training focus on trick originality and variety. Comparatively, only 30% of AMT-COMP participants focused on trick originality. No ELITE-COMP participant indicated a training focus on aesthetics, aggression, or obstacle difficulty. All COMP-STREET ($n = 6$) participants indicated a focus in training on flow, style, and trick variety, compared to 87.5%, 75%, and 62.5% of COMP-PARK, respectively. COMP-PARK participants indicated a focus in training on power ($n = 6$, 75%) and height ($n = 5$, 62.5%), compared to two COMP-STREET (33%).

Recreational skateboarding performance

Half of COMP participants ($n = 7/14$) reported that the importance of various factors for performance differed for recreational skateboarding compared to competitive; three

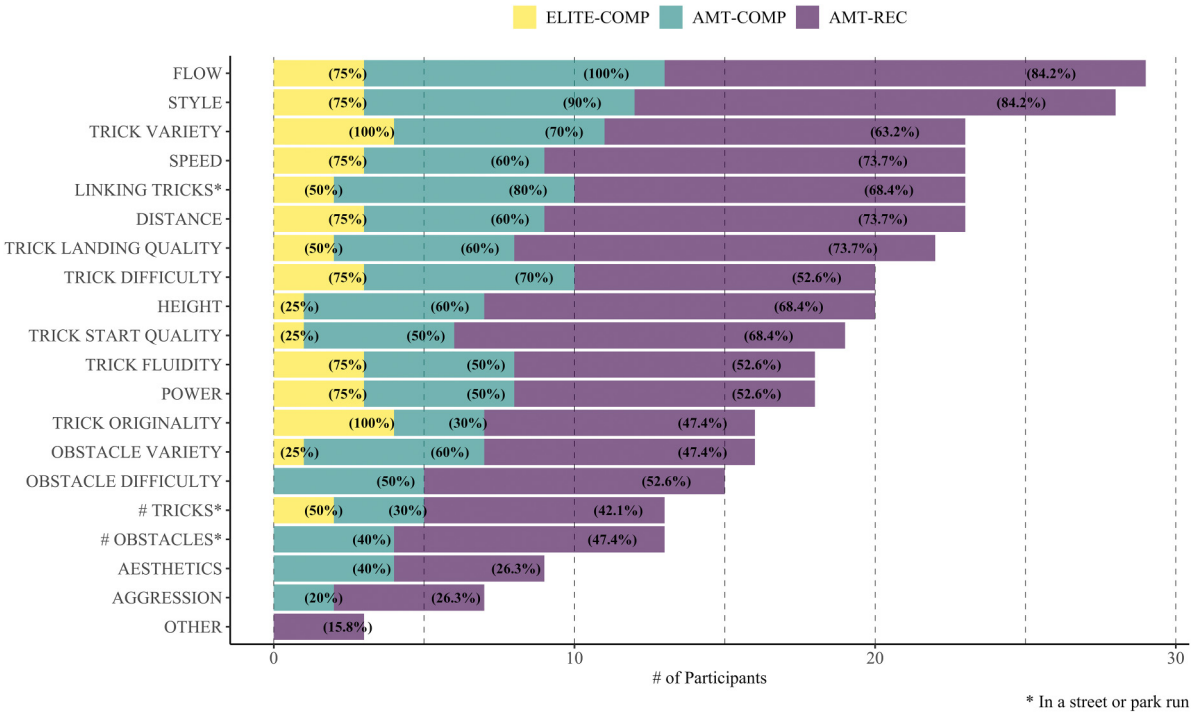

Figure 4. Factors in which skaters focus on the most when training to improve their skateboarding performance (participants were to select all that applied). Responses are grouped by skill; elite (ELITE) or amateur (AMT), and involvement level; competitive (COMP) or recreational (REC).

Table 2. Demographic summary of survey participants.

		Mean ± SD			
Group[a]	Number of Participants	Age (years)	Skating Background (years)	Current World Ranking[b]	Highest Achieved World Ranking[c]
ELITE-COMP	4 (4 M, 0 F)	25.5 ± 2.89	11.5 ± 13.61	24.3 ± 23.64	15.0 ± 15.98
AMT-COMP	10 (7 M, 3 F)	25.8 ± 12.21	20 ± 1.63	–	–
AMT-REC	19 (18 M, 1 F)	36.8 ± 10.14	19.3 ± 12.98	–	–
COMP-S	6 (2 ELITE) (5 M, 1 F)	23.8 ± 6.31	11.3 ± 8.57	10.2 ± 23.46	6.7 ± 15.37
COMP-P	8 (2 ELITE) (6 M, 2 F)	27.1 ± 12.71	15.8 ± 14.38	4.5 ± 8.40	2.5 ± 4.90

AMT = amateur; COMP = competitive; F = female; M = male; P = park; REC = recreational; S = street.
[a]Community groups: ELITE-COMP (professional, internationally competitive elite), AMT-COMP (regionally competitive amateur), AMT-REC (regional recreational amateurs), COMP-S (both elite and amateur competitive street) and COMP-P (both elite and amateur competitive park).
[b]Self-reported current (day of submission) World Skate World Ranking.
[c]Self-reported highest achieved (at any point) World Skate World Ranking.

(75%) COMP-ELITE and four (40%) AMT-COMP skaters (COMP-PARK (n = 6/8) and COMP-STREET (n = 1/6)). The most important factors for recreational skating were consistent with responses regarding competitive skating; flow (n = 13) and style (n = 11) (Figure 5). All ELITE-COMP participants reported a different factor they felt was the most important for recreational success (trick originality, flow, style, and trick variety).

REC and COMP participants significantly differed with a large effect on the importance of power (W = 148.5, p =

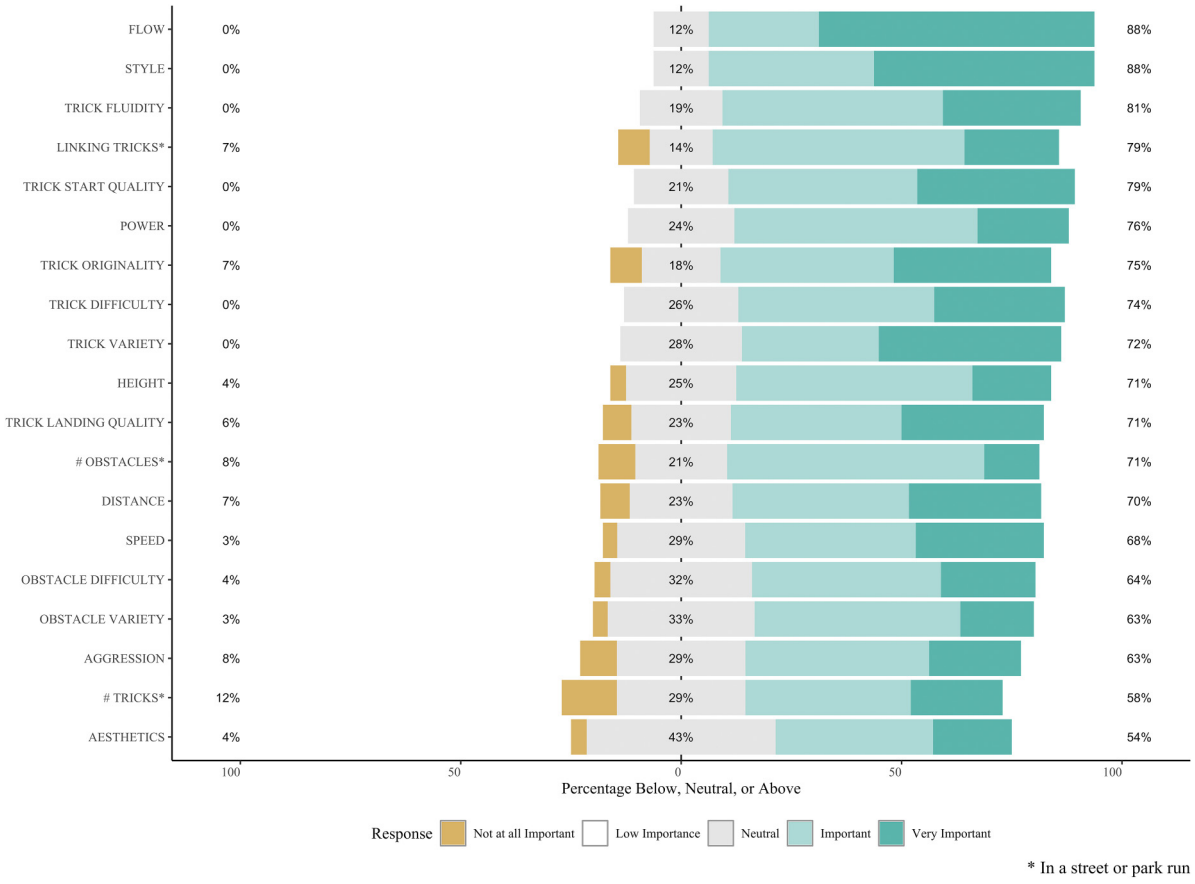

Figure 5. Overall factors and importance level for recreational performance in skateboarding. Responses were given on a 5-point Likert scale (1 - Not at all Important, 2 - Low Importance, 3 - Neutral, 4 - Important, 5 - Very Important). Percentages from left to right represent the percentage of participants that reported the factor as Not at all important or low importance (1 or 2), neutral (3), and important or very important (4 or 5), respectively. The horizontal axis (0%, 50%, 100%) represents the percentage of values to the left and right of the centre line (0%), respectively, whilst splitting the neutral responses in half; left: neutral (3, half), low importance (2), or not at all important (1), and right: neutral (3, half), important (4), or very important (5).

0.01, r = 0.558); power was important or very important to recreational skateboarding for all COMP participants, compared to 61% of REC. Specifically at the amateur level, there was a significant difference and large effect in the importance of power (W = 108.5, p = 0.03, r = 0.571) and medium effect in the importance of aggression (W = 72, p = 0.03, r = 0.379). All AMT-COMP skaters indicated it was important or very important, compared to 53% of AMT-REC.

COMP-PARK skaters found repetition criteria; trick variety (86% COMP-PARK, 50% COMP-STREET) and obstacle variety (57% COMP-PARK, 40% COMP-STREET), more important to recreational skating than COMP-STREET skaters, who placed more importance on speed (100% COMP-STREET, 50% COMP-PARK) and trick difficulty (80% COMP-STREET, 71% COMP-PARK), however, reported quality of landing as not important at all to recreational skating (20% COMP-STREET, 12% COMP-PARK). COMP-STREET skaters also placed importance on aesthetics (100% COMP-STREET, 17% COMP-PARK) and trick originality (80% COMP-STREET, 50% COMP-PARK); 17% of COMP-PARK (0% COMP-STREET) skaters felt trick originality was not important at all. COMP-STREET and COMP-PARK did not significantly differ on any importance level of factors for recreational skating.

Discussion

A sample of recreational and amateur to elite competitive skaters were surveyed regarding their perceptions of the importance of different performance criteria (World Skate judging criteria) to competitive and recreational street and park disciplines. Overall, flow and style were deemed most important, although differing discipline and skill-specific views within competitive communities indicated some ambiguity. Nonetheless, competitive skaters reported focusing their training on what they deem important to competitive success. Elite skaters focused on originality and variety, while the focus of amateur participants

varied. Competitive street skaters highlighted aesthetics and trick originality, whilst park skaters viewed difficulty in selection (trick, obstacle) and execution of tricks (height, power) as more important. Both groups value flow and style when skating for recreation. Moreover, while community values of recreational skating generally align with World Skate's judging criteria, notable discrepancies exist, particularly concerning the emphasis on the number of tricks performed in a run.

World Skate judges apply the same criteria for both street and park skateboarding, as reflected in the shared emphasis on style and flow, which competitive skaters from both disciplines consistently prioritised in this study. However, skaters differed on the importance of underlying style metrics. Street skaters valued aesthetics and trick originality, while park skaters prioritised power, height, and difficulty in both competition and recreational environments. These differences may stem from the physical traits required for each discipline, particularly speed generation. Park skaters rely on pumping and height to maintain speed and perform tricks, requiring strength and power.[13,14] In contrast, street skaters generate speed through kick-pushing[15] and focus on stylish execution, such as foot placement and board control.[16,17] Street skaters emphasised aesthetics, with all surveyed skaters agreeing on its importance, whilst park skaters remained neutral, focusing more on difficulty and height. One explanation is that street judges may place more emphasis on originality, whilst park judges prioritise difficulty over originality, as seen in half-pipe snowboarding.[18] These findings suggest that street and park competitions are underpinned by distinct performance criteria, highlighting the need for independent analysis of these disciplines.

Both elite street and park skaters valued speed, but there was less agreement regarding the importance of aesthetics and originality. The criteria defining a more successful aesthetic (or a stylish performance) in competition remain ambiguous and unquantified, however, in recreational skateboarding, research has linked peak performance to a state of "effortless" flow, an appearance of "letting it happen".[19] This flow state was related to elements of uncertainty, novelty, and experimentation, potentially quantifiable measures of style and flow that were deemed important to elite street success in this survey. Alternatively, previous research also suggests the existence of a distinguishable 'clutch' state in skateboarding, characterised by "making it happen", such as when landing more challenging, higher-risk tricks; like the first or last trick in a run or a best-trick attempt.[19] Notably, flow and clutch states require different styles of self-regulation and varying underlying skills.[20] More challenging, higher-risk tricks often require greater speed, power, and height. These factors were particularly valued and prioritised in training by the surveyed elite park skaters. This suggests objective elements of clutch and flow states may capture nuances of park and street skateboarding, including their weighted importance by judges. Thus, future research should explore how quantifiable measures related to clutch and flow states (e.g., novelty of tricks, landing of higher-risk tricks. etc.) relate to street and park judging outcomes so training can be adjusted accordingly. This information would also support the focused development of amateur skaters looking to progress in competition.

Differences in disciplines transfer to training priorities, where street skaters concentrated on flow, style, and variety, and park skaters emphasized power and height. Thus, training practices appear to be closely aligned with what skaters believe to be important for competition. This was further echoed in the differences in perspectives by skill level. Elite skaters consistently emphasized originality and variety in their training, whereas only a subset of amateur competitors prioritised these aspects. This could be due to amateurs' focus on fundamentals, before attempting to differentiate themselves through originality and variety. Moreover, amateur and elite skaters likely differ in access to resources, competitions, training, and support, which may influence their views on what constitutes performance and their ability to train them. Accordingly, elite sponsored skaters might prioritise factors like technical precision, consistency, and adherence, whilst amateurs may naturally focus more on enjoyment. A clear understanding of how to impress judges at the highest level is needed to ensure coaches can support the development of amateur athletes looking to progress their skating in the competitive realm.

The skaters surveyed placed importance on all of the criteria presented in this survey, suggesting congruence with what World Skate has indicated as essential to elite competitive success (or indeed understanding of the criteria, themselves). However, the level of importance differed both within and between skill levels. For example, each elite athlete suggested a different criterion that was most important in competition, whilst amateur competitors' views on performance were relatively homogenous. An argument could be made that skaters selected what they believe judges feel is important to competition success (e.g., how to win). If this is true, this survey shows that these skaters place importance on different aspects of skating when for recreation, possibly suggesting a misalignment between community values of the sport and the criteria by which they are judged in competition. Alternatively, skaters may have responded by selecting criteria they personally believe contribute to 'better' skateboarding (as originally intended). In which case, these are aspects they consider as important and are therefore likely the focus of their training (as indicated in the survey). This may reflect an alignment with World Skate's overall impression approach, which allows judges to evaluate an entire performance without overemphasising a single facet.[2] Alternatively, it may indicate an athlete's bias towards

their personal strengths, highlighting the subjectivity inherent in such evaluations. Nevertheless, competitive judging results—an aggregation of multiple judges' overall impressions—do not provide a clear breakdown of an athlete's strengths and weaknesses for each performance. Understanding what constitutes a 'better' performance, including the relative weighting of these criteria, could help skaters and coaches decide on what to emphasise in their training based on their relative strengths and what is important.

Lastly, whilst discipline and skill-level community views on recreational skateboarding generally align with World Skate's competition judging criteria, with all World Skate criteria neutral to very important to the majority of participants, notable discrepancies exist, particularly concerning the emphasis on the number of tricks performed in a run. Some skaters (12%) reported the number of tricks in a run as not at all important to recreational skating; the strongest negative importance of all performance metrics presented. Nevertheless, all competitive and recreational skaters said it was important for competition success, possibly due to their understanding of the importance placed on this factor by judges. Trick quantity may be crucial for competitive success, but it appears to hold less value in recreational skating. This discrepancy highlights the need for competitive practitioners and skaters to understand how competition demands differ from recreational priorities.

Limitations, practical applications, and future recommendations

This research provides valuable insights into how elite and amateur street and park skaters perceive and prioritise skateboarding performance criteria in both competitive and recreational contexts. However, we acknowledge the limitations of a small sample size and thus may not have captured the perspectives of the broader skating community—notably, the subset of elite, Olympic skateboarders—and a more encompassing investigation would be warranted. More to this point, future research should look to explore potential sex differences in perception, particularly that of elite female skaters, a group not represented in this study. Nevertheless, the results from this study provide practical findings to implement in an applied setting and guide future research:

- Future exploration is necessary to determine the relative contribution of different performance criteria to successful outcomes in competition.
- Researchers and practitioners should implement methodologies that capture the distinct characteristics and unique competitive requirements of street and park skateboarding.
- Researchers, practitioners, and skaters should recognise the distinct performance demands of competitive skateboarding compared to recreational skateboarding.
- Underlying objective aspects of flow and style (such as elements of flow and clutch states) should be included in future approaches to better understand the relative importance to competitive success.

Consent to participate

Not Applicable

Consent for publication

Not Applicable

Data availability

Data is available upon reasonable request via direct mail to the corresponding author.

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Ethical considerations

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Supplemental material

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