

University Students' Perceptions of Barriers, Institutional Readiness, And Benefits of A Student-Organised Esports Competition: An Event-Based Campus Survey

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ABSTRACT

University esports competitions are increasingly positioned as co-curricular platforms that may strengthen student engagement, transferable skills, and institutional visibility. However, organising esports events can also involve practical barriers such as resourcing, sponsorship continuity, administrative processes, and hybrid online-offline delivery. This study examined students' perceptions of (a) barriers, (b) institutional readiness/support, and (c) benefits of organising a university esports competition using an event-based cross-sectional survey administered during a one-week student-organised campus esports competition. A total of 535 responses were analysed. The findings indicated high levels of agreement regarding perceived barriers, institutional readiness/support, and the benefits of organising university esports competitions. Students recognised funding, sponsorship, and event-management challenges while simultaneously viewing esports as a valuable platform for networking, skill development, and institutional engagement. Organisers perceived greater benefits than non-organisers, and strong positive relationships were observed among barriers, readiness/support, and perceived benefits. These findings suggest that successful university esports initiatives require both adequate institutional support and sustainable resource planning to maximise educational and developmental outcomes.

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1. INTRODUCTION

Esports have developed into a prominent digitally mediated competitive ecosystem with increasing relevance for higher education, particularly through student clubs, campus competitions, and institution-supported facilities (Delello et al., 2021). Universities are drawn to esports events because they can function as co-curricular platforms for engagement, skills development, and institutional branding, but they also raise operational questions about sustainability, resourcing, and governance (Zhong et al., 2024). Work on sustainability in esports underscores that esports ecosystems involve multiple stakeholders and value-creation logics, which often requires deliberate coordination to remain viable over time (Saiz-Álvarez et al., 2021).

From a higher education perspective, students can perceive esports as connected to transferable competencies; for example, research has examined perceived links between esports and the “4Cs” (critical thinking, creativity, collaboration, and communication) within higher education learner populations (Karadakis & Painchaud, 2022; Setiamurti & Kurniawati, 2024).

A key gap in the campus esports literature is that studies and institutional discussions often treat esports “benefits” and esports “constraints” separately, even though real-world campus delivery frequently requires students and institutions to navigate both simultaneously (Delello et al., 2023; Zhong et al., 2024). Addressing this gap, the present study integrates perceptions of barriers, institutional readiness/support, and benefits within a single event-based campus survey administered during an active student-organised university esports competition.

In Malaysia, esports have gained official recognition as part of the national digital transformation agenda. The National E-Sports Blueprint (2020–2025) outlines strategies to develop Malaysia into a regional esports hub through policy alignment, infrastructure development, and education sector participation. The Malaysian government has also invested in initiatives led by the Ministry of Youth and Sports and the Malaysia Digital Economy Corporation (MDEC) to foster local talent, integrate esports within higher education, and strengthen industry–academia linkages (Omar, 2025). These efforts reflect a growing institutional commitment to formalising esports as both a cultural and educational enterprise within the Malaysian higher education ecosystem.

This study is informed by Social Exchange Theory (SET), which posits that individuals evaluate participation in activities based on the perceived balance between costs and rewards (Blau, 1964). Within the context of university esports competitions, barriers may represent perceived costs, while institutional readiness/support and event benefits represent perceived rewards. SET therefore provides a useful lens for understanding how students simultaneously recognise organisational challenges while maintaining positive perceptions of esports participation. The theory further suggests that favourable perceptions of institutional support may strengthen the perceived value of esports activities despite operational constraints (Blau, 1964; Cook et al., 2013).

Literature review

University esports is commonly framed as a student engagement and skills-development opportunity, but institutional implementation varies by governance arrangements, resourcing, and programme structures (Zhong et al., 2024). Within higher education, governance and departmental leadership significantly affect how esports programs are structured, supported, and sustained over time. In higher education settings,

esports have been discussed as a context linked to perceived development of transferable skills, including communication and collaboration, and it may facilitate technology-oriented exploration for students (Delello et al., 2021; Karadakis & Painchaud, 2022). Studies show that participation in collegiate esports can improve collaboration and communication skills that translate to professional contexts (Kakihara, 2025). At the same time, esports ecosystems are shaped by sustainability pressures, including the need for coherent stakeholder alignment, resourcing strategies, and responsible governance, which can influence whether events remain consistent and scalable over time (Saiz-Álvarez et al., 2021).

Within the Asian region, the institutionalisation of esports has accelerated across countries such as South Korea, Singapore, and Japan, where higher education institutions have integrated esports into curricula and co-curricular frameworks supported by industry partnerships. In Malaysia, adoption remains at a formative stage, with several universities including Asia Pacific University (APU) and Taylor's University establishing esports clubs, facilities, and partnerships with local federations to promote professionalised campus competition and digital talent development (Asia Pacific University of Technology & Innovation, 2023). This regional trajectory highlights the increasing legitimisation of esports as an educationally significant and economically strategic field across Asia.

A sustainable campus esports model requires not only financial support and infrastructure but also institutional integration across academic and student life units (Zhong et al., 2024). Operationally, esports events depend on infrastructure and venue considerations, including stable network performance, adequate equipment, and suitable spaces to support competitive integrity and spectator experience (Barken et al., 2023). These requirements are especially significant when competitions are student-run and rely on existing university facilities, which may not be optimized for digital competition environments. Moreover, higher education esports initiatives emphasise interdisciplinarity: program implementation often combines event management, broadcasting, marketing, and community engagement, suggesting that event delivery is not merely “competitive play” (Scott et al., 2021), but also entails administrative coordination, marketing, and community management. Such initiatives demonstrate that esports functions as a multidisciplinary platform that unites digital media, business, and education in practice-oriented settings.

Given this landscape, an integrated survey approach that captures perceived barriers, readiness/support, and benefits during live campus competitions can clarify how students and staff experience esports at institutional and personal levels. This approach aligns with recent work emphasizing the interconnected nature of perceived benefits and implementation constraints within university esports (Delello et al., 2023; Zhong et al., 2024).

Although previous studies consistently report positive educational and developmental outcomes associated with esports participation, much of the literature has focused on perceived benefits in isolation. Research has shown that esports participation can enhance teamwork, communication, leadership, critical thinking, social connectedness, and digital literacy among students (Rasdi & Rusli, 2021; Dimitriadi & Saeed, 2025; Archibald, 2024). Comparatively less attention has been given to how students simultaneously evaluate institutional readiness and organisational challenges during actual event implementation. As a result, existing findings may provide an incomplete understanding of the university esports experience because positive outcomes and operational constraints are often examined separately (Luo et al., 2025).

By looking into the barriers, perceived barriers in esports extend beyond infrastructure to include organisational, social, and cultural dimensions. According to Lim et al. (2022), the shifting behaviour in

Malaysia evident during Covid-19 pandemic where there has been an accelerated esports activities and structural limitations in sustained growth and participation as universities and communities transitioned to online and hybrid engagements. This indicates that while esports popularity expanded, participants may somehow encounter constraints related to resource availability, institutional coordination, as well as adapting to evolving competitive formats. In addition, the ecosystem-level research in Malaysia also found that while most respondents recognise the accessibility of esports, a portion of participants indicated that adequate infrastructure such as reliable internet connectivity, structured training, and organised clubs as well as resources are not uniformly available, reflecting constraints that could hinder engagement and progression within the esports ecosystem (IYRES, 2023). This highlights how physical, organisational, and informational gaps can shape perceptions of difficulty or limited support in engaging with esports activities.

Esports participation has been linked to a variety of cognitive, social, and developmental outcomes. By referring to Van Rooij and Kilburn (2025), the quantitative findings suggest that students generally perceive esports as capable of cultivating essential 21st-century skills such as communication, collaboration, creativity, and critical thinking, and that higher levels of engagement are associated with stronger perceptions of these skills' development. This shows that even beyond recreational enjoyment, esports environments can function as contexts where learners practice and reinforce transferable skills valued in educational and professional settings.

On the other hand, in terms of gender differences in esports engagement, it remains an important focus of inquiry. Malaysian research examining fan identification across gender in esports contexts has found negligible differences in perception and engagement levels, suggesting nuanced patterns of gendered engagement within esports communities (Zaidi et al., 2025). However, separate related research on female gamers' experiences highlights barriers related to discrimination, stereotypes, and identity negotiation in gaming spaces, which indicates that gender dynamics influence both participation and perceptions of esports environments (Mohamad Tuah et al., 2025). This combination of findings underscores the need for gender-aware analysis in esports research.

Despite growing scholarly attention to university esports, three important gaps remain. First, most studies focus either on developmental benefits or implementation challenges rather than examining both dimensions simultaneously. Second, limited research has investigated students' perceptions during an active esports event, with many studies relying on retrospective evaluations. Third, evidence from Malaysian higher education contexts remains relatively limited despite national efforts to expand esports participation. Addressing these gaps, the present study adopts an event-based survey approach to examine perceived barriers, institutional readiness/support, and perceived benefits within a single student-organised university esports competition, leading to the following research questions:

RQ1. What are the levels and most salient indicators of perceived barriers, institutional readiness/support, and perceived benefits for organising a university esports competition?

RQ2. Do perceptions of barriers, institutional readiness/support, and benefits differ by role (organisers vs non-organisers) and gender?

RQ3. What are the relationships among perceived barriers, institutional readiness/support, and perceived benefits?

2. METHODS

This study employed a quantitative, cross-sectional survey design conducted at a single university campus during a student-organised esports competition held over one week. The esports competition was organised by the university's esports club, and data collection occurred on-site throughout the event period to capture real-time perceptions of organising-related challenges, institutional readiness/support, and perceived outcomes. The design is best characterised as an event-based campus survey, with data collected during active programme implementation rather than retrospectively after the event.

Participants were recruited using a campus-wide, event-based approach in which the survey invitation was distributed to students present at the esports competition venue during the one-week competition period. The intent of distribution was inclusive (such as, offered broadly to student attendees rather than a narrowly targeted subgroup). Respondents comprised students who were involved as organisers, as well as students who attended the competition in non-organiser roles (e.g., competitors/participants and spectators). In the analysed dataset ($N = 535$), respondents were predominantly non-organisers (coded as student participants; 96.6%), with a smaller subgroup of organisers (3.4%). Participants were predominantly male (69.5%) and aged 18–20 (71.6%). Most reported mobile gaming as their primary platform (74.0%), followed by PC (14.2%) and console (11.8), and the most common game genre was MOBA (46.2%). The distribution of weekly gaming hours was concentrated between 1–2 hours (31.2%) and 3–6 hours (36.4%). These characteristics indicate that the sample largely reflects the student esports-attending population accessible during the competition week, with a smaller but analytically informative organiser subgroup. Demographic and gaming-related characteristics are presented in Table 1.

Table 1: Demographics of Respondents ($N = 535$)

Demographic	Category	Frequency	Percentage (%)
Role	Student participant (non-organiser)	517	96.6
	Organiser	18	3.4
Gender	Male	372	69.5
	Female	163	30.5
Age range	18–20	383	71.6
	21–23	131	24.5
	24–26	21	3.9
Gaming platform	Mobile	396	74.0
	PC	76	14.2
	Console	63	11.8

Demographic	Category	Frequency	Percentage (%)
Weekly gaming hours	0–1 hour	63	11.8
	1–2 hours	167	31.2
	3–6 hours	195	36.4
	7–10 hours	65	12.1
	11–20 hours	23	4.3
	> 20 hours	22	4.1

Note. Percentages may not total 100 due to rounding.

The instrument consisted of three constructs measured using Likert-type agreement items, with higher scores indicating stronger agreement. All items were measured on a 5-point agreement scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). Perceived barriers were measured using four items focused on challenges commonly encountered during esports event organisation, including funding sufficiency, sponsor continuity, administrative permissions, and hybrid online–offline delivery management. Institutional readiness/support was measured using 12 items assessing perceptions of university support adequacy and effectiveness, including financial support satisfaction, infrastructure and equipment adequacy, administrative efficiency, academic balance, marketing effectiveness, inclusivity, and online integrity management. Perceived benefits was measured using 19 items assessing perceived positive outcomes, including skill development, engagement, branding, sponsorship opportunities, technology and innovation orientation, collaboration/networking, and personal development. Scale scores were computed as mean scores across items for interpretability on the original response metric. One benefits item contained values beyond the intended 5-point maximum due to a coding anomaly; these values were top-coded to the maximum response value to preserve measurement integrity.

Data collection occurred during the esports competition across a one-week period. Students were invited to participate while attending the competition as organisers, competitors/participants, or spectators. Participation was voluntary, and responses were collected anonymously. Data were screened for completeness and response-range consistency prior to analysis. One item in the dataset included responses coded beyond the intended 5-point range (coded as “6”); to preserve the measurement scale’s intended structure, these responses were top-coded to “5,” which is consistent with handling a minor coding anomaly when the value exceeds the instrument’s maximum.

Data analysis addressed the research questions through reliability testing, descriptive statistics, group comparisons, and correlational analysis. Cronbach’s alpha was used to assess internal consistency reliability for each construct. Means and standard deviations were computed to identify salient barriers, readiness/support indicators, and benefits. Welch’s independent-samples *t* tests were used to compare gender and role groups due to unequal group sizes and to reduce sensitivity to variance heterogeneity. Cohen’s *d* was reported to estimate effect sizes. Pearson product–moment correlations were calculated to evaluate relationships among perceived barriers, institutional readiness/support, and perceived benefits.

3. RESULT AND DISCUSSION

3.1 Respondents' Characteristics

Reliability results indicated strong internal consistency across all constructs (Table 2), supporting the use of aggregated mean scale scores for subsequent analyses. Descriptive findings showed relatively high agreement across perceived barriers ($M = 3.84$, $SD = 0.73$), institutional readiness/support ($M = 3.81$, $SD = 0.72$), and perceived benefits ($M = 3.96$, $SD = 0.73$). This pattern suggests that students may evaluate campus esports competitions as both operationally challenging and beneficial, rather than viewing challenges and benefits as mutually exclusive. In practice, this aligns with the notion that esports ecosystems involve multiple interacting components that must be coordinated for sustainable delivery.

Table 2: Scale Reliability and Descriptive Statistics

Construct	k	Cronbach's α	M	SD
Perceived barriers	4	.84	3.84	0.73
Institutional readiness/support	12	.95	3.81	0.72
Perceived benefits	19	.98	3.96	0.73

Table 3 presents the mean (M) and standard deviation (SD) of perceived barriers and institutional readiness or support. In relation to RQ1, the most salient perceived barrier concerned constraint concerning securing sufficient funding ($M = 3.92$, $SD = 0.90$). Managing the online-to-offline format (online qualifiers with offline finals) was also strongly endorsed ($M = 3.84$, $SD = 0.85$), followed by difficulty attracting consistent sponsors ($M = 3.81$, $SD = 0.92$) and obtaining permits/permissions ($M = 3.77$, $SD = 0.86$). (Table 3). These findings highlight resourcing and delivery logistics as central concerns in student-organised esports competitions. Such concerns are consistent with venue and infrastructure discussions in esports, which emphasise that successful hosting often requires appropriate facilities, technology readiness, and operational planning.

Institutional readiness/support was rated positively overall, with comparatively higher endorsement for marketing effectiveness and inclusivity. However, the comparatively lower endorsement points were satisfaction with financial support ($M = 3.68$, $SD = 0.93$) and the broader domain of infrastructure/equipment adequacy (domain mean ≈ 3.70), suggesting that resource-related components may represent priority improvement areas. This pattern implies that while universities may be perceived as capable of promoting esports events and supporting diverse communities, students may still identify resourcing and infrastructure as improvement priorities, which aligns with higher education discussions that esports initiatives span multiple operational domains.

Table 3: Item-Level Descriptives for Barriers and Institutional Readiness/Support

Domain	Item (short label)	M	SD
Barriers	Securing sufficient funding is a major barrier	3.92	0.90
Barriers	Attracting consistent sponsors is difficult	3.81	0.92
Barriers	Obtaining permits/permissions is challenging	3.77	0.86
Barriers	Managing online qualifiers with offline finals is challenging	3.84	0.85
Readiness/support	Financial support for esports events is satisfactory	3.68	0.93
Readiness/support	University internet/network is sufficient	3.68	1.01
Readiness/support	High-performance gaming equipment is readily available	3.71	0.94
Readiness/support	Dedicated esports space/arena is available	3.71	0.96
Readiness/support	Administrative approval processes are efficient	3.76	0.86
Readiness/support	Esports participation positively affects academic performance	3.81	0.89
Readiness/support	Good balance exists between academics and esports schedules	3.85	0.86
Readiness/support	Esports events are marketed/promoted effectively	3.89	0.85
Readiness/support	Social media/digital platforms are used effectively for promotion	3.96	0.83
Readiness/support	Event meets diverse game-community interests	3.88	0.86
Readiness/support	Events are inclusive and appeal to a wide range of players	3.92	0.83
Readiness/support	Risks of online cheating are managed effectively	3.87	0.87

Perceived benefits were consistently high (presented in Table 4), with the strongest endorsement for international collaboration and networking (domain mean ≈ 4.06). The single highest-rated benefit item indicated that esports events facilitate international collaboration/networking ($M = 4.26$, $SD = 0.85$), underscoring respondents' perception that esports events can generate outward-facing connectivity beyond the local campus context. Organisers perceived higher benefits than non-organisers, suggesting that event planning roles may yield stronger perceived learning, networking, and developmental outcomes. This aligns with higher education evidence that students can associate esports with transferable skills and broader developmental benefits. However, it also indicates that benefit perceptions may be shaped by proximity to organising work, responsibilities, and stakeholder interaction.

Table 4: Item-Level Descriptives for Perceived Benefits

Benefit domain	Item (short label)	M	SD
Skills development	Improves students' project management skills	3.92	0.84
Skills development	Improves teamwork and communication skills	3.97	0.85
Community engagement	Fosters a strong student community spirit	3.94	0.83
Community engagement	Increases student engagement in university activities	3.99	0.87
Community engagement	Connects students with industry professionals	3.90	0.84
Branding/recognition	Improves the university's reputation	3.91	0.83
Branding/recognition	Attracts positive media attention	3.96	0.82
Branding/recognition	Strengthens image as modern and innovative	3.97	0.83
Sponsorship opportunities	Attracts valuable sponsorships	3.92	0.83
Sponsorship opportunities	Showcases facilities/resources to potential sponsors	3.92	0.83
Tech and innovation	Promotes adoption of new technologies	3.91	0.82
Tech and innovation	Encourages exploration of tech/gaming careers	3.97	0.82
Tech and innovation	Develops livestreaming/content-creation skills	3.96	0.82
International/networking	Facilitates international collaboration and networking	4.26	0.85
International/networking	Can attract international students	3.96	0.84
International/networking	Exposes students to international best practices	3.95	0.83
Personal growth	Improves personal leadership skills	3.92	0.83
Personal growth	Provides valuable learning experience	3.94	0.85
Personal growth	Builds achievement and pride among organisers/participants	3.97	0.82

For RQ2, gender comparisons were statistically significant across all three constructs with small effect sizes (see Table 5). Male respondents reported higher agreement than female respondents on perceived barriers (male $M = 3.91$ vs female $M = 3.66$), $t = 3.81$, $p < .001$, $d = 0.34$. Male respondents also reported higher institutional readiness/support (male $M = 3.87$ vs female $M = 3.67$), $t = 3.10$, $p = .002$, $d = 0.28$, and higher perceived benefits (male $M = 4.04$ vs female $M = 3.79$), $t = 3.84$, $p < .001$, $d = 0.34$. Role comparisons between organisers and non-organisers showed no significant differences for perceived barriers (student $M = 3.84$ vs organiser $M = 3.78$), $t = 0.39$, $p = .703$, $d = 0.08$, or for institutional readiness/support (student $M = 3.81$ vs organiser $M = 3.87$), $t = -0.45$, $p = .661$, $d = -0.08$. However, organisers reported markedly higher perceived benefits than non-organisers (student $M = 3.95$ vs organiser $M = 4.44$), $t = -4.45$, $p < .001$, $d = -0.68$, indicating a moderate-to-large practical difference in benefit perceptions that may reflect organisers' closer exposure to learning, networking, and institutional-facing outcomes. This organiser–non-

organiser difference suggests that organiser involvement may amplify perceived value, possibly due to experiential learning opportunities embedded in event planning, coordination, and delivery.

Table 5: Welch's t Tests for Group Differences (Gender and Role)

Comparison	Construct	Group 1 M	Group 2 M	t	df	p	Cohen's d	Mean difference 95% CI
Gender	Barriers	Male 3.91	Female 3.66	3.81	343.10	< .001	0.34	[0.12, 0.37]
Gender	Readiness/support	Male 3.87	Female 3.67	3.10	336.84	.002	0.28	[0.07, 0.33]
Gender	Benefits	Male 4.04	Female 3.79	3.84	351.20	< .001	0.34	[0.12, 0.37]
Role	Barriers	Non-organiser 3.84	Organiser 3.78	0.39	18.57	.703	0.08	[-0.26, 0.38]
Role	Readiness/support	Non-organiser 3.81	Organiser 3.87	-0.45	19.35	.661	-0.08	[-0.32, 0.21]
Role	Benefits	Non-organiser 3.95	Organiser 4.44	-4.45	20.25	< .001	-0.68	[-0.73, -0.26]

Note. Welch's t test reported due to unequal group sizes. Organiser group n = 18

For RQ3, strong positive correlations were observed among perceived barriers, readiness/support, and benefits, as presented in Table 6. Perceived barriers were strongly associated with institutional readiness/support ($r = .86$, $p < .001$) and with perceived benefits ($r = .76$, $p < .001$). Institutional readiness/support was also strongly associated with perceived benefits ($r = .81$, $p < .001$). This pattern indicates that respondents who endorsed higher barriers also tended to endorse higher readiness/support and higher perceived benefits, suggesting that many students may view esports-event implementation as a complex ecosystem in which challenges and positive outcomes co-exist rather than mutually exclude one another. One plausible interpretation is that more engaged or informed students recognise both the complexity of esports-event delivery and its potential co-curricular value. This pattern reinforces the importance of integrated institutional planning that addresses resourcing, administrative support, and hybrid delivery while sustaining learning and engagement outcomes.

Table 6: Pearson Correlations Among Key Constructs

Pair	r	95% CI
Barriers–Readiness/support	.86***	[.83, .88]
Barriers–Benefits	.76***	[.72, .79]
Readiness/support–Benefits	.81***	[.78, .84]

Note. *** $p < .001$.

3.2 Discussion

This study examined perceptions of barriers, institutional readiness/support, and benefits of a student-organised university esports competition using an event-based cross-sectional survey administered during a one-week campus competition. The key contribution lies in the integrated measurement of all three domains within a single event context, addressing a notable research gap in which benefits and constraints are often considered separately (Zhong et al., 2022; Delello et al., 2023). Findings revealed that students expressed high agreement across barriers, readiness/support, and benefits, suggesting that the campus community can acknowledge operational constraints while still valuing the developmental and institutional advantages of esports events.

In terms of barriers, funding and sponsorship-related issues were most strongly endorsed, with securing sufficient financial backing emerging as the highest-rated constraint. This aligns with wider research indicating that sustainable esports event delivery is heavily dependent on stable funding pipelines and sponsor partnerships, both of which remain uncertain for student-led initiatives (Freitas, 2023). Hybrid delivery management was also identified as a significant challenge, reflecting the operational complexity of competitions that combine online qualifiers with on-campus finals. This supports previous evidence that esports management within universities often struggles to balance digital infrastructure with in-person logistical demands (Scott et al., 2021).

Institutional readiness/support was rated positively overall, though resource-related indicators, particularly financial assistance and infrastructure adequacy, scored comparatively lower. This pattern suggests that while students may appreciate administrative or promotional backing, they perceive ongoing shortfalls in tangible resourcing. Comparable findings have been reported in Malaysian higher education, where students acknowledge administrative encouragement for digital engagement but continue to face infrastructural and funding gaps. Despite national policy support, the operational readiness of universities to sustain esports programmes is often hindered by limited budget allocation, uneven access to high-performance equipment, and unclear facility management frameworks (Kaur & Law, 2025). These patterns echo broader regional trends across Asia, where institutional enthusiasm for esports frequently outpaces infrastructural preparedness. For universities seeking to professionalise or expand esports offerings, the development of clear resourcing models, which includes venue access procedures, hardware standards, and transparent funding mechanisms, may be essential to align institutional capacity with student expectations (Barken et al., 2023).

Perceived benefits were notably high, especially in relation to collaboration, networking, and global connectivity. Organisers reported substantially greater perceived benefits than non-organisers, reflecting their deeper engagement with event planning, stakeholder coordination, and experiential learning processes.

This finding resonates with research showing that esports involvement supports the development of transferable skills such as teamwork, communication, and leadership (Delello et al., 2021; Karadakis & Painchaud, 2022). Malaysian research similarly links esports participation with personal and leadership development, indicating that involvement in event coordination enhances communication, problem-solving, and resilience among student organisers (Ezhilnanggai, 2025). These findings reinforce the interpretation that organiser roles within campus esports function as experiential learning contexts that cultivate both digital and interpersonal competencies. Such organiser roles may therefore represent high-impact co-curricular learning opportunities, reinforcing the educational value of structured esports engagement. Gender differences were statistically significant but small, suggesting nuanced perceptual variations that could reflect role distribution or cultural participation patterns within campus esports (Kakihara, 2025). These differences merit cautious interpretation given the cross-sectional nature of the data and possible contextual influences such as familiarity with esports or access to gaming facilities.

The strong positive correlations observed among barriers, readiness/support, and benefits suggest that respondents did not evaluate the esports event in a simple positive–negative dichotomy. Instead, those most aware of organisational challenges were also more likely to acknowledge institutional support and event value, implying a mature understanding of esports ecosystems as complex but rewarding environments (Zhong et al., 2024). This pattern aligns with the emerging view that esports education requires integrated stakeholder coordination and reflective engagement among participants. However, the strong correlations should be interpreted cautiously because all constructs were measured through self-report perceptions collected during the same event context. Future research should extend this approach using multi-campus and cross-national samples, potentially incorporating Malaysian universities where student-led esports initiatives are increasing, but empirical documentation remains limited. Investigating role-specific patterns (organisers, competitors, spectators) and additional covariates such as prior experience or familiarity with hybrid events would enhance understanding of how university esports contribute to both institutional goals and student learning outcomes.

The findings may also be interpreted through the lens of Social Exchange Theory. Students appeared to recognise both the costs (for example, funding and organisational challenges) and rewards (for instance, networking, skill development, and institutional engagement) associated with esports competitions. The strong positive relationships among barriers, readiness/support, and benefits suggest that awareness of challenges does not necessarily diminish positive evaluations. Rather, students who are more engaged with esports activities may develop a more balanced understanding of both the demands and rewards associated with event participation.

4. CONCLUSION

This event-based campus survey demonstrated that students perceived a student-organised university esports competition as highly beneficial while also recognising substantial operational barriers. Funding sufficiency and hybrid online–offline delivery management were the most salient challenges, while international collaboration and networking emerged as the most strongly endorsed benefit. Organisers perceived markedly higher benefits than non-organisers, indicating that organising roles may provide especially strong co-curricular developmental value. Overall, findings support an institutional approach that strengthens resource allocation, infrastructure readiness, and hybrid event-management support while leveraging esports competitions as engagement- and skills-development ecosystems.

These findings also resonate with regional trends, as esports continues to gain recognition as a legitimate competitive and educational domain across Asia. The inclusion of esports as a medal event in the 2023 Asian Games underscores its growing institutional legitimacy, mirroring higher education's efforts to formalise esports governance, infrastructure, and talent pipelines (Qian et al., 2024). Malaysian universities may draw from these regional models to strengthen policy alignment and long-term sustainability in their esports ecosystems.

From an academic perspective, this study contributes to the university esports literature by providing an integrated examination of perceived barriers, institutional readiness/support, and benefits within a single event-based context. Unlike previous studies that often investigate these dimensions separately, the present study demonstrates that students may simultaneously acknowledge operational challenges while maintaining positive perceptions of institutional support and educational value. The findings therefore extend current understanding of esports as a multidimensional co-curricular ecosystem rather than a purely recreational activity.

Several limitations should be noted. First, the study relied on self-report data collected during a single university's esports competition, which may limit generalisability to other institutional contexts. Second, although the study conceptually involved organisers, competitors/participants, and spectators, the analysed dataset operationalised the role primarily as organiser versus non-organiser, and the organiser subgroup was small. Future studies should oversample organisers and disaggregate non-organiser roles into competitors and spectators to clarify role-specific perception patterns. Third, the cross-sectional design precludes causal claims, and the observed correlations may partly reflect shared method variance. Subsequent research may use longitudinal or pre–post event designs and incorporate qualitative follow-up (for example, organiser interviews) to triangulate mechanisms behind the observed relationships.

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6. CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

7. AUTHORS' CONTRIBUTION

Noor Azli Affendy Lee conceptualised the study, coordinated event-based data collection, conducted the analyses, and drafted the manuscript. **Nurul Farzanah Mohd Rosli** and **Fasyin Diyana Mohamad Fadzil** contributed to the refinement of the research instruments, prepared the Google Forms–based questionnaire, conducted the literature review and data collection, participated in the interpretation of the findings, and contributed substantially to the revision and refinement of the manuscript. **Mohd Ikmal Fazlan Rozli**

@Rosli and Kay Dora Abd Ghani contributed to the literature synthesis, presentation of results, and critical review of the final draft. All authors approved the final version for submission. **Ahmad Fadhil Abd Majid** contributed to this research especially on arranging the esports event, handling participants and dealing with relevant authorities to make this research a success.

8. DECLARATION OF GENERATIVE AI IN THE WRITING PROCESS

During the preparation and revision of this manuscript, generative artificial intelligence (AI) tools may have been used to support language refinement, grammar checking, and improvement of structural clarity. The use of AI was limited to editorial assistance and did not replace the authors' scholarly judgement or contributions. The authors remain fully responsible for the originality, accuracy, interpretation of findings, and final content of the manuscript. All AI-assisted outputs were reviewed and verified by the authors before submission.

9. ETHICS STATEMENT

Ethical approval for this study was obtained from the Faculty of Science and Engineering Research Integrity and Research Ethics Committee of University of Nottingham Malaysia (Reference number: KYQ300922). Written informed consent was obtained from all participants prior to enrolment in the study.

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