NASEF Y4 Research: Student Interviews

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Over the past decade, interest in high school esports has grown considerably. One such league that has seen immense growth over the last four years is the North America Scholastic Esports Federation (NASEF). NASEF’s rapid expansion from a league serving schools in a single Californian county to an international program enriching esports participation for youth across 31 countries worldwide shows the far-reaching potential of these high school esports leagues.

NASEF not only provides a league to participate in esports but also aims to leverage the interest esports generate into scholastic development and interest. This enriched program includes esports-related scholastic programs to foster academic, social, and emotional benefits. Research over the past three years suggests that NASEF has positive outcomes for participating youth in areas such as STEM interest, school affiliation, emotional self-regulation, and positive relationships with adults and peers. The investigation detailed in this report aims to further our understanding of these impacts and how students themselves experience them.

Toward these ends, we conducted interviews with participating students to better understand their perceptions of the impacts of the NASEF program and their opinions of the NASEF league, clubs, and coaches. Our research questions were the following:

1. What is participation in the NASEF like from the student perspective?
2. What are student attitudes and opinions toward the club?
3. How do students perceive the program’s overall impacts?

Data Collection

Sample

To achieve a representative sample of the NASEF community, we used demographic data (academic year, ethnicity, and disability status) from NASEF registration to recruit participants for interviews to match the overall demographics of the league. We chose to oversample female players in this analysis to better understand what their experiences were like given the known issues in professional and collegiate esports more broadly. Despite these efforts, recruitment was somewhat lackluster, likely as a result of COVID, so we shifted to a convenience sampling strategy in order to achieve sufficient sample size. At final count, 38 students participated in this interview study over the course of the Fall and Spring seasons. Of these 38 participants, five opted to not be recorded and four recordings failed due to audio recording issues, resulting in a total of 29 codable transcripts and 9 sets of field notes that were used to corroborate the themes that appeared in the coded transcripts. The resulting pool of participants were
representative of the NAEF population except in terms of gender (as described) and academic year, with grade 11 students slightly overrepresented in the final sample.

Figure 1 below details the overall demographic of the sample. Among the 38 participants in the study, 10 identified as female, 25 male, and 3 nonbinary. Grade level skewed older with 1 seventh grader, 3 high school freshmen (grade 9), 6 sophomores (grade 10), 17 juniors (grade 11), and 11 seniors (grade 12). Reported ethnicities were predominantly White (15) and Asian (11), with only 4 identifying as Latinx and 8 identifying as a mix of multiple ethnicities. Three (3) participants identified as having a disability. Participants were mostly located in California, but in total 15 states were represented: 18 in California, 5 in Illinois, 3 in Pennsylvania, 2 in Missouri, and 1 each in Florida, Iowa, Indiana, Kentucky, North Carolina, Nebraska, New Jersey, New York, Texas, and Utah.

![Sample demographics](image1)

**Figure 1.** Sample demographics.

In terms of club involvement, students in the sample had been club members for an average of roughly 2 years total (M=1.98 years) and a range from 1-3 years (SD = 0.74 years). Eight (8) of the students interviewed played more than one game title for the league and one (1) reported being a club member
without playing any game title in the league at all. Game titles played by the pool of participants interviewed included *Overwatch* (18), *League of Legends* (9), *Rocket League* (9), *Super Smash Bros.* (3), *Minecraft* (2), *Valorant* (1), and *Rainbow Six Siege* (1).

**Procedure**

We conducted 30-60 minute interviews with each participant about their experiences in the program. These interviews followed McCracken’s (1988) long interview format and were conducted on Discord due to COVID-19 restrictions. The goal of the interviews was to clarify any patterns found within the survey data collected simultaneously, allowing us to understand students’ reported experiences and impressions throughout the year in a more detailed and contextualized way. Topics covered in the interviews included demographics, their participation in NASEF, perceptions of NASEF’s impacts, and opinions on their club and coaches. Students were compensated for their participation with a $50 USD Amazon gift card. For the full interview protocol, see the Appendix.

Interviews were transcribed via an automated transcription service then cleaned by hand to address any errors in transcription. Each transcript was then uploaded to Dedoose coding software for content analysis (Krippendorff, K., 2018). A team of four researchers then coded the transcripts based on 12 main themes shown in Table 1 below with sub-themes listed for each.

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<th>Table 1. Analytic Codes Used and Their Definitions</th>
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<td><strong>Participation</strong></td>
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<td><strong>Attitudes Toward NASEF</strong></td>
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<td><strong>Student Leadership</strong></td>
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As a check for inter-rater agreement, 4 researchers coded a single transcript and compared codes to identify and resolve differences in their coding strategies, then coded another transcript where sufficient agreement (85.2%) was found. The remaining transcripts were then divided and coded by individual researchers with problems and challenges discussed across the team. In what follows, we detail our overall findings in terms of the key research questions above.

Findings

RQ1. The Nature of Participation

Our first question was more or less descriptive in nature, aimed at a detailed understanding of the club experience from the perspective of the participating students.

Students report that clubs are supervised by an adult General Manager (GM), usually a teacher-sponsor at the school that serves as a liaison between the club students and the school (and school board if necessary). GMs are generally the ones to coordinate scrimmage schedules and communicate NASEF events, although sometimes this task falls to the team captains. While GMs and presidents oversee the gaming or esports club as a whole, individual teams tied to specific game titles were overseen by a student team captain. Some teams have additional support from a Connected Camps coach, a near-peer mentor who helps both with in-game communication and tactics as well as out-of-game support for the well-being of their student players. In addition to club meetings for announcements and team practices, some clubs would also host their own tournaments, play other non-league games together, or just hang out.

Clubs are generally led by a student Club President who organizes wider-club meetings and activities such as tournaments. Some clubs have other leadership positions such as Secretary or Treasurer who help manage club resources. Beneath the general Club President are Team Captains for each of the competitive games in which the club competes. Team Captains are usually in charge of organizing practices for their team, finding scrimmages to play against other teams, and managing individuals on their team. Clubs generally first meet all together for club-wide announcements and then would break off into individual teams to practice for each individual game.

Figure 2 below illustrates the most common structure across the school sites of students interviewed. The Club President (a student) and Club GM (an adult) oversee the whole club. Captains (students) and coaches (adults) are associated with each team. Clubs may have additional floaters that are not associated with a specific competitive team but rather participate as needed.
Figure 2. The common NASEF club structure as implemented in school sites.

Team practices usually involve some kind of warm up activity, skills training, a practice game, and post-game discussion. Some clubs run VOD reviews, where they watch recordings of their previous gameplay together, picking out what went right and what went wrong, and strategizing how to do better next time. VOD reviews are usually led by the team captain.

Nearly all competitive team players interviewed (28/29) are in clubs supervised by a teacher or staff member from their school as their GM who serves as the liaison between the club students and the school administration. Nine (9/28) students have GMs who take on additional coaching duties for games they are familiar with, while some facilitate logistics and help find scrimmages. Many participants (21/28) also have an external coach provided by Connected Camps. These coaches offer specific advice on everything from in-game tactics and communication to conflict management and self regulation. Students expressed a strong value placed on coaching in NASEF and struggled with difficulties with access to limited staff, but once they got a coach, *all students had only positive things to say about it.* For the students, the coaches were a crucial part of the entire NASEF program. Coaches organized practice, worked with individual students and teams to give in-game just-in-time feedback to help improve their game, and did structured reflection sessions after-the-fact in the form of VOD reviews.

Practices usually occur after school in the computer lab or the sponsoring GM’s classroom. Clubs meet once or twice a week, with a possible additional practice for individual teams depending on the game and level of competitiveness. Club meetings are usually an hour or two long, supervised by a GM; practices are additionally supervised by a coach from Connected Camps in programs with access. Teams also play together outside of formal practice, whenever their teammates are available. In response to
the COVID-19 pandemic, the clubs’ Discord generally became the new central hub of activity: announcements were posted there, and club members could find players for a pick-up game, or just hang out in the channels. In some cases, the number of club members went up, even if they were not active in the Discord. This is likely due to being part of a Discord channel is a lower barrier to entry than showing up to a meeting. However, as a few participants noted, the higher member count is not always indicative of more participation.

In terms of the overall attitude and feeling of the club, the ethos or general spirit that characterized NASEF in their particular implementation and context, about half of students interviewed (14/29) described their club as having a competitive attitude towards their play and about half (14/29) described their club in the opposite terms as more relaxed. Many across both categories emphasized that their club’s attitude toward their activities was a healthy mix of both, competitive and driven during key periods but social and easygoing during downtimes.

RQ2. Student Attitudes and Opinions

Our second research question focused on students’ own attitudes and opinions toward the program, with a particular eye toward their motivation for participating, their perceptions of equity and access in the club, whether and how clubs fostered or thwarted diversity among its members, their goals and aspirations, and any lingering concerns.

Motivations

Students founded or joined the NASEF clubs in their school for a wide variety of reasons. Most students (13/29) joined their school’s NASEF club because they identified as gamers and wanted to be part of a larger gaming community in their school. A few students (8/29) joined because their friends were in it, and when, in some cases (2/29) they had never really gamed online before. Some joined for the specific opportunities NASEF provides such as competing in tournaments (5) and the chance to win college scholarships (3). Only a few (2) joined because they happened to play the game title used that season and wanted to specifically compete in it.

Seven (7) of the participants interviewed were not just participants in NASEF at their school but founders of the program. Of those seven (7), the majority (4/7) reported that the NASEF clubs began Here, motivated students looking to form their own new venue for friendship and gaming approached a supportive school staff member who then connected them to NASEF. The remainder of the founders (3/7) reported that it was an inspired adult school staff member who raised the idea as a way to socialize and game after school.

Equity and Access

Because equity is a driving concern for NASEF leadership, we asked students directly about how fair they found the playing environment and whether they felt that everyone who had an interest in playing were given a fair chance to do so. The majority of students interviewed thought the club and league structures were inclusive and fair; here we focus on the concerns that were mentioned since, when it comes to equity and access, it’s the barriers and frictions that are of keen interest, not just the ways in which the program already gets it right. Two issues in particular generated more talk than others: funding and the subsequent access issues it raised and diversity in terms of both gender and ethnicity.
Of the schools represented by students interviewed, most offered some sort of funding for the NASEF club, but this support varied greatly between schools. Participants stated that their schools provided access to equipment (16 of 29) or funding for equipment (15 of 29) for their club. Some were sourced from external donors while others were sourced from school-associated fundraising activities (e.g. selling In-and-Out burgers). Such funding went towards a variety of expenses such as ensuring a stable internet connection, one of the club’s top concerns, or computers that could adequately run the games being played. Most clubs preferred desktop computers over laptops given their performance differences, but because desktops cost more, less capable laptops were sometimes all a school could afford to make available. This led many students to attempt to purchase their own desktop computer at home if possible. Clubs also provided gaming gear such as keyboards, mice, headphones, and gaming chairs, or paid for students to attend paid tournaments outside of the NASEF league. But here too, students supplemented their needs within the club through personal resources.

Half of students interviewed (15 of 29) said their NASEF club lacked sufficient funding, leading to significant issues with access. Some students (8/29) reported unequal and insufficient access to school computers for club activities. Two (2) mentioned having only enough equipment for 5 to 6 players, forcing members to take turns and otherwise wait around to play. In these cases where access to equipment was an issue, it was the players’ own social economic status that tilted the playing field, allowing some to afford their own gaming setup at home that in turn meant more practice, greater gains, and unequal access to successful outcomes. Even when schools provided equipment, students mentioned that the equipment and space provided was not amenable to club activities:

We actually don’t have any place to really play games with each other. Although we do have a computer lab, it’s not really for gaming and it’s not gaming computers in any way, shape or form. It’s school computers and for school things. So we don’t use those computers and I don’t think we should anyways. (Student 27)

This again led students to use home equipment for those whose families could afford it or to save up for personal equipment for those whose families could not. A gap in access based on family SES is unmistakable.

**Diversity**

Discussion around diversity in these clubs must be prefaced with the fact that every club was majority male. Notably, 5 of the 10 female participants brought up negative experiences related to being one of the few girls on their team, especially when they first joined and were unfamiliar with the other students and often felt left out or an overall sense of not belonging. In one student’s case, even though most of her male clubmates were welcoming, the negative attitude of others toward her female teammates was alienating:

I think I’ve heard there are some people who talk about the girls’ team sometimes. They talk about how sometimes the team sucks. I think there’s one guy in the guys’ team that bashes on us and then the guys tell him to shut off. So the guys team, for the most part, they’re really nice to us and some of them actually tried to coach us and help us with stuff. I think there was a scrimmage and they tried to help, give tips. So most people are pretty nice to us, some people aren’t. But at least not to our faces. (Student 1)
These social dynamics can change, though, as club members get to know each other through participation. Another female student described this change through their interactions with another member of the club:

I think most of the time it was unconscious. Nowadays we all know each other very well of course, and we’re all good friends... Some of them, I even know their parents. So I think maybe at first it might’ve had something to do with a conscious choice that they had made, but now at this point I would have to say that if they did, it would be completely an unconscious decision. And I personally am not the person to go and say something to them of course. (Student 29)

As those relationships strengthened, so too did community support. One student described the support they received from their clubmates over the course of two potentially difficult years in the following terms:

In freshman year I thought I wanted to transition to become a woman, and everyone was supportive of that, nothing was bad happening with that, everyone used the correct name and pronouns for me. Then sophomore year I kind of transitioned back to questioning what I want to be. And everyone was so supportive with that. And then when I finally figured out that I just wanted to be a nonbinary, they were supportive of that too. (Student 18)

Ethnic diversity, however, was not always so well valued. One student who was the only Asian student in his club commented that out of the game, everyone was treated equally and respectfully, but in-game banter and joking would sometimes be racist or sexist. Humor is used as an explanation for these kinds of toxic comments and so long as they were lighthearted jokes, they weren’t seen as bad or toxic or in need of defending against.

Everyone is treated equally. Sometimes they make racist jokes, but yeah, it’s fine. I mean, it’s funny. I just laugh it off. It really doesn’t bother me. I know some people it bothers them, but for me personally, I’ve been dealing with that for the last ten years so I’m fine with that. I’m used to it now...During the games, sometimes someone would make a sexist joke and it would be funny. I know they made sometimes not appropriate jokes for school, but we would mostly laugh it off. Sometimes we’d get inappropriate but most of the time we try to keep it school appropriate. Usually it’s not like bad jokes. We usually just joke around, nothing more comes from that” (Student 33)

Four interviewees (including Student 18 quoted above) reported that their clubs were indeed supportive of their LGBTQ+ identities. In fact, no participants reported unsupportive clubs when it came to questions of gender identity and sexual preference. Even in those cases where students felt harassed at school for being openly LGBTQ+, the club was a locus of support that they could rely on within that adverse environment. Moreover, this community support that NASEF clubs specifically offered was viewed as essential to fostering an environment that engages and benefits all students, not just those who are minoritized. As one student summarized it, NASEF helped them become more personally supportive of the LGBTQ+ community as a whole.

My parents don’t support LGBTQ in general. And I had to get over my bigotedness about that because of how I learned it from my parents. And the internet has helped me so much with that... I’ve met and talked to people who live in Florida, especially through NASEF, that helped me too. Talking to people in different states and such, and across the world has helped me learn
so much more than I would have if I had just sat on my couch and talked to my parents or my friends in Nebraska. (Student 37)

While issues of equity and inclusivity loom in the greater community of gaming and esports, within the community created by NASEF, students report being welcomed for who they are and for their mutual interest in the games played. Obviously, norms for inclusive communication and behavior must be established and modeled early on for students to feel comfortable each season, but it is clear across these interviews that once students understand those norms and bond through joint participation, the NASEF culture and community offer a positive, safe, support spaces for students regardless of gender identity and sexual orientation.

**Goals and Aspirations.** When asked about their goals and aspirations for the future of their club, students’ identified objectives in four main areas: infrastructure, expansion, diversity, and competition. Nine (9/29) students had specific goals related to the club’s infrastructure – specifically, they wanted to increase funding for equipment, better engage both new and existing members, and ensure the longevity of the club after this first generation of participants graduates. Seven (7/29) students wanted their clubs to broaden the range of opportunities they provide in terms of the number and nature of games offered and opportunities to stream or shoutcast. Seven (7/29) wanted the club to increase the membership diversity and maintain a safe environment for students to interact, while five (5) were concerned with increasing the opportunities to compete. Across all four areas, students emphasized an underlying value toward serving club members regardless of their motivations for participation, be it competitive, creative, or community-driven.

**Concerns.** We asked students directly if there were any concerns they had about the NASEF program or their club’s particular style of implementation. Twenty (20/29) offered a few thoughts but gave relatively detail. One more frequent concern (12/29) was about the level of commitment within their school. Students expressed concern that their school should do more to promote and sustain NASEF programming. Another more frequently mentioned concern related to the level of commitment and discipline from participating students, citing concerns about club longevity in the face of graduating members, decreased club activity due to the pandemic lockdown, and players who did not show up ready and on time to scheduled events. Seven (7/29) students had concerns about their school’s team environment. Here, concerns ranged from a desire to protect the non-toxic environment in NASEF to concerns over negative attitudes within the team. Five (5/29) students were concerned about communication between their club and the league as a whole, citing difficulties obtaining tournament schedules, scrimmages, and events involving other NASEF clubs. Some wanted to find a greater variety of teams to compete against while others expressed concern over the skill differences between teams at tournaments. Two (2/29) expressed frustration in the diversity of the club’s recruitment efforts, and two (2) expressed concern about equal access to equipment and sufficient wifi access.

**RQ3. Perceived Impact**

Our third and final research question was designed to triangulate and contextualize the impacts of NASEF measured quantitatively through the annual survey, replicating interview questions used in the first year of NASEF (2018) that asked students directly what they perceived as the benefits of participating in NASEF. In 2018 interviews, school affiliation and developing social-emotional skills were listed as the most compelling benefits of NASEF membership. Now three years later (2021), we find that NASEF’s positive influence on communication and on students’ school and career ambitions take center stage along with its impact on positive school affiliation, school performance (GPA), and emotional wellness.
Communication

Overwhelmingly, improved communication was one of the most cited positive gains among students interviewed. A good three-fourths (22/29) of students interviewed stated that their ability to communicate effectively was positively impacted by participation in the program. NASEF teams actively worked to improve upon in-game communication throughout the year. The net result was that students cared more about their communication as a result, were better able to recognize good communication and to diagnose problems when they arose, and were better able and willing to engage in collaborative, respectful forms of talk that allowed teams to function, even under pressure and time constraints. Some competing teams simply worked on keeping communication open and calling things out as they arose, learning how to communicate effectively during games over the Discord. Other teams were prompted to really listen and be more aware of their teammates’ communications. Coaches had various drills that they might use to demonstrate the importance of these kinds of communication skills. These drills included having students play blindfolded with a partner, requiring the student who could see to communicate enough information to enable the other to play effectively. While students remarked that this was a very challenging drill, they also hailed its efficacy. Students also remarked that they would take turns acting as the “shotcaller” tasked with making decisions for the entire team to follow. Such moments were crucial to the success of the match, requiring the shotcaller to make timely decisions with the authority to lead the team to capitalize on an advantage that might only be available for a short amount of time. Typically, a single student, called the “in-game leader” (IGL), will take this role, but some of these students report that their coaches encourage them to let other students shotcall so that they can improve on their confidence, leadership, and ability to communicate:

If we want a team fight, I’m typically the guy that says, okay, everybody, we're going to team fight plan this. I plan out the next fight of what's going to happen and how we're going to plan it. Then our other support, our main support, Joe, he would say, okay, what else they have and I would talk about what else we have and what we're going to do to win this next fight. Then Shane, our main tank, he's the guy that calls out, okay, we're diving this person. Oh, we're going to run over this. Then depending on what comms we're playing and how it goes. David is typically the guys saying, okay, we win this by rushing their front line, or taking out their backline, or doing this. Everybody plays a system within the team like, okay, you're the guy that does this, you're the guy that does that, you're the guy that does this. (Student 12)

School and Career Ambitions

The presence of NASEF and the academic scholarships it offers have an influence on students’ imagined futures. Twelve (12/29) students stated that participating in NASEF directly influenced their college and career aspirations. For others, simply being exposed to the esports ecosystem model (Lee & Steinkuehler, 2018) detailing esports careers beyond just team competition “gave [them] a little bit of hope of like ‘Oh wow. This is something that I could potentially make out of as a career’” (Student 20). For others, their existing interests in videogames, design, and engineering was reinforced and legitimated by their participation in the club. Nine (9/29) participants said that NASEF introduced them to a new hobby or provided an outlet for an existing hobby by introducing them to related activities such as story development, shoutcasting, voice acting, and streaming. One student, for example, with an interest in psychology applied his burgeoning knowledge to his Overwatch team, using constructs from the domain to understand and improve team collaboration and systems understanding as a whole. Here, we see the “games as a Trojan horse for academics” model in full effect, with the club activities a context for applying academic knowledge and skills.
School Affiliation and Grades

NASEF also played a role in school affiliation and performance. Some students (4/29) described how the club gave them something to look forward to, increasing their motivation to get through the school day. As one student commented,

> On game days where we had matches at school, I felt like I always had to go to school just so I could be at the practice and it kept me inspired and stuff just to get through the day. I was like, all right, just finish this class and we can go grind. (Student 14)

Others (3/29) said that NASEF’s GPA requirements encouraged them to keep their grades up.

Emotional Wellness

This year’s research was conducted during a year unlike any other, in the midst of a global pandemic with students socially isolated at home or attending classrooms with limited social interaction and social distancing. Thus, emotional wellness was a key concern. Across our interviews, students described several positive benefits from NASEF participation on their emotional wellness, including time management (6/29), cultivating a positive mental attitude (4/29), learning how to better manage both their screen time (3/29) and their feelings of frustration (4/29). Students felt that the mentoring and guidance they received from staff and peers helped them develop stronger resilience strategies and emotional wellness as a result.

> I think it’s really important as players and as people who do play on a team, you need rest and you just need to be positive. Because if you’re not anything like that, you feel upset before the match, I don’t think you’re going to play well. You’re probably going to go into it, you’re going to make a lot of mistakes without thinking about it and then you might even not realize that you’re making these mistakes because you’re just thinking about something else. So, you need your mind on the game. You just need to be relaxed. For me, it’s really hard to this year because I feel so much pressure being captain and manager, compared to being a player. (Student 11)

Faced with leading his team in the midst of an already abnormal year, Student 11 responded modestly, drawing strength from the mentors and older students before him to “take it slow, don’t stress about it and always take one step at a time.” He expressed how teammates taking care of themselves as individuals, both physically and emotionally, was important to not only playing better but also just being aware of how they played.

That said, four (4/29) students described their struggles with general or social anxiety and how it served as a barrier at times to full participation in the club and two (2/29) discussed how gaming impacted their struggles with depression, indicating how the club environment served as a coping mechanism or scaffolding for greater engagement:

> On Wednesdays it was always fun just hanging out with everyone and just talking about stuff. I’m a very introverted person because of my social anxiety, so no one really talked to me besides a select few people anyway, since everyone had their own groups already. But it was nice just being there I guess. It was pleasant. (Student 18)
Student 18 describes how even though club members already had their groups, they were content just hanging around. With more time and familiarity with the club, one student found it easier to talk to others at her school:

I think it helped me with my social anxiety at school a little bit, because before I didn't talk to anyone, now I talk to at least a little bit more and a little bit more open.” (Student 16)

Implications

Through these interviews we have gained a better understanding of what NASEF clubs look like at the ground level and how the students perceive the program, its key features, and its benefits.

NASEF clubs are overwhelmingly student-driven. While clubs may have a GM that helps organize and run the club and a coach that helps guide and advise students, students are in many cases the founders, the presidents, the treasurers, and the team captains. Students often know the game titles played better than their supporting staff and only need the school staff as support to give them structure to expand the club or to improve the skills they need to compete. In this way, NASEF esports are more akin to an interest-driven school club rather than a varsity sport, attracting like-minded students who typically come for the love of the game and stay for social reasons.

One of the biggest concerns that students had about their clubs was longevity. Students were concerned about the commitment of other club members and worried that the club would not continue once they left, either after graduating or transitioning out. Students rightfully see themselves as the beating heart of the clubs. The school may give them structure and permissions, but it is students’ passion and willingness to contribute to the organization that, in their view, keeps the clubs alive. They are not wrong; NASEF was designed to be student led, student staffed, and student driven.

Students raised two primary issues when discussing equity and diversity in their clubs. First, access to equipment. Here, students remarked that, although nearly all receive access to equipment to practice and compete on, the equipment provided is usually not optimized for competition and puts them at a disadvantage. In competitive gaming, certain equipment can mean the difference between reacting to an opponent's actions in time or not, and a lousy internet connection can spell defeat for any team regardless of their training, preparation or effort. Students understand that these differences in equipment mean the difference between playing at their best or not, and as a result, students rely on personal computers and gaming equipment to compete, creating an equity divide that reflects the socio-economic status of players more than skill. Finding ways to level the playing field is crucial to NASEF meeting its goals of providing enriched esports to everyone.

A second issue was the gendered nature of the esports playspace. Many students reported that their clubs were welcoming to their and others gender identity, sometimes even more so than the rest of the school or their own family. Yet, some students who identified as female still reported having negative experiences regarding their gender when they joined. Here we find an interesting juxtaposition between the NASEF esports communities and the esports ecosystem. NASEF is not impervious to sexism toward female gamers, but there are strong early signals that, compared to the mainstream esports, NASEF has managed to create welcoming spaces for a diversity of students across gender identity lines. There are well-known issues of toxicity towards women, trans, and nonbinary people in the gaming and esports community; NASEF has not entirely avoided all of these issues, but certainly some.
Students unanimously see improved communication as one of the biggest, most consistent gains for participation. They report that the NASEF program and scholarships have also influenced their own future school and career aspirations, their feelings of affiliation with school and success (grades). But an equally important outcome that students reported was the development of their social-emotional skills. It turns out that the fast-paced, team-based, stressful environment of esports serves as a powerful context for developing strategies for managing emotion and frustration. Breathing techniques, taking breaks, blowing off steam, and reframing their frustration in a more self-positive light prove to be effective not just in esports competitions but offstage, in classrooms and living rooms and public life, leaving students feeling more capable of maintaining a professional attitude towards teamwork, competition and self-improvement overall.

Limitations

While these findings are helpful in confirming and contextualizing the quantitative findings from this year’s research, we must also acknowledge its limitations in generalizability. Foremost, these interviews came at a unique time for many students. The interviews were conducted from December 2020 to May 2021 and as such, most (21) students commented on how the COVID-19 pandemic and lockdown impacted the usual flow of club activities. A major change was how not only club practices, but also school and meetings were no longer in person and moved wholly online. Some things became easier: team practices could be longer and students found more time to play or pursue other hobbies. For some, using their home set up was more comfortable and a technical improvement on the school equipment; others, though, lacked access to personal gaming equipment (PCs, game consoles) at home, and inequities linked to access were only exacerbated. As Discord servers became central hub for club activities, the number of members rose (presumably in response to the lower barrier of entry), but active participation dropped and the competitive spirit was diminished. As one student described it,

   Everything is shut down. So there’s kind of the feeling that why should we practice if there is no competition to look forward to, there’s no reward. So we’re kind of sitting like this neutral ground, like just a cocoon. There’s nothing to look forward to, why would we play? (Student 10).

This dour sentiment captured the betrayal of expectations back in March 2020: plans to attend tournaments were suddenly cancelled, the club social scene was dampened, and schools’ reduced commitment, one of students’ most prevalent concerns, proved demoralizing. For some, the transition to online schooling destroyed their motivation:

   COVID right now I don't like any of my classes. I just can't get myself, I think it's because of the home environment, but frankly I just don't have any passion for any class. I'm actually very behind on calculus right now and I still need to catch up on that, but I can't get myself to care about it or I can't get myself to be excited for it, I just see it as a chore. I wake up at seven, turn on my laptop while in bed and then get out of school at two, and then I just go into my own thing, it's not exciting at all.” (Student 15).

In contrast, the same student commented that, on designated days when they could go to campus,

   It was fun to finish school and immediately go to our designated club classroom. Our general manager is our comp sci teacher, [and] we would meet in the comp sci lab for our meetings. Just
looking forward to that in a day, because we did have designated days where we would go [to campus], just looking forward to that was really fun. (Student 15).

Finally, while this sample aimed to be representative, we encountered some challenges in recruitment. This led us to oversampling students in the 11th grade and undersampling those in grades 9, 10, and 12. There could be developmental differences that the findings here do not capture as a result.

References
APPENDIX: STUDENT INTERVIEW PROTOCOL

NOTE FOR IRB REVIEWERS: Long interviews (McCracken, 1988) are one-on-one conversations that are guided by a guiding set of topics for discussion and a set of prompts to deepen and extend discussion on the points raised. The following protocol details both. The interview should last 30-45 minutes and will be incentivized with a $50 Amazon gift card. Interviewers do not have access to the student’s prior survey responses.

About the Study
Hello! My name is _____ and I’m a researcher at UCI. We are interviewing NASEF students to get a better understanding of their experiences, perceptions and impacts. I’d like for this interview to be fairly conversational, so feel free to talk and I’ll ask a few follow up questions if there’s anything else I needed. Everything is just about your experience and your ideas, so no right or wrong answers, and nothing you say will be tied back to you. Everything is voluntary, and you are free to answer or not answer any questions and can end the interview at any time. The entire interview should take about 40 minutes and if you don’t mind, we will be recording the interview audio and then transcribing it for analysis. Is this okay?

Obtaining Consent
- Did you get a chance to look over the Study Information Sheet?
- Any questions about the Study Information Sheet?
- Confirm they are eligible: NASEF member?
- Obtain verbal consent to the interview.
- Obtain verbal consent to audio record. If consent is not given, do not record.

Demographics
- Name, age
- Review Study Information Sheet
- Family
  - Members
  - Shared routines/activities
- Parent’s view of gaming (+ perception of parental support)
- School
  - Which school
  - Overall grades in school
    - Attitudes toward school
    - Extracurriculars, Hobbies
    - Future career aspirations
  - Typical School day Routine
  - NASEF within that routine
  - Overall attendance

NASEF Participation
• Roles in club (ecosystem diagram)
• Activities in club
• Narrative history of joining
• Favorite memories
• Least favorite memories
• Perceptions of club community
• Aspirations of club community

NASEF Impacts
• Self-regulation (tilt, tilt recovery)
• Communication (in-game, in-room, beyond club)
• Relationships (with peers, teachers, family)
• Wellness (satisfaction with club, physical health, gaming moderation)
• Interest in new school subjects (STEM)
• School Engagement (value of school, connectedness)
• Constructive Mindset (mastery orientation)

Coaching
• On competitive team?
• Virtual Coach assigned?
• Impact of coach on team interactions, success
• Lessons learned from coach beyond the game
• Other impressions of coaching

Opinions on the Club
• Concerns?
• Opportunities/ Impacts? Has being part of the club introduced you to anything new? Or built upon something you already enjoyed?
• Equity: Is this a fair playing environment? Even playing field/ playing environment? Within the school, do you feel there is a fair distribution of equipment/ opportunity to participate? Is anything not equal?
• Does your team/ club get a lot of funding/ where do you get most of your funding from?

Closure
• Anything else you want to tell about NASEF
• Aspirations for next year
• Will send you a link via email for the $50 Amazon gift card
• Close recording. Confirm age/ gender/ grade/ ethnicity.
• Confirm demographics: Name/ game they play/ years in club/ position/ any other activities.