

## NASEF Internal Report: Tilt

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### NASEF

The North America Scholastic Esports Federation (NASEF) is a non-profit esports program for middle and high school students. What makes NASEF unique is its *enriched esports* model. NASEF uses student interest in esports as a context and means for learning, school affiliation, and social-emotional skills. The NASEF program accomplishes this through school-affiliated extracurricular clubs rather than just isolated competitive teams, engaging students not only in competitive play but also in esports-related intellectual and professional activities from shoutcasting to logo design, from expository writing to data analysis, from club leadership to team collaboration. The research detailed herein is part of the program's assessment and evaluation, funded by the Samueli Foundation to ensure that the program continues to make good on its stated mission and goals.

One of the important goals of NASEF is to help build healthy practices among young people in regard to their ability to self-regulate their emotions and their attention. In esports, the lack of such ability is referred to as “tilt,” a much-used but rarely defined phenomenon in which players are triggered by a person or event in the game, which generates frustration and other negative emotions, which in turn start to negatively impact decision-making and gameplay overall. Tilt is an important construct for NASEF to understand because it represents the *esports version of self-regulation*, a version that already resonates with players and one that they are often keen to address given its negative impact on peers and play.

### Study Design and Methods

In order to investigate students' conceptions of tilt, its causes, and its consequences, we conducted a survey of NASEF students and follow-up interviews with NASEF staff to get a sense of how students defined tilt, what triggered it, how they commonly responded to it, and whether or not they viewed it as something that could be changed. The student survey was conducted online and included the following four questions, each representing a separate variable (in italics):

- *Tilt Definition*: What are some words you associate with tilt?
- *Tilt Triggers*: What gets you tilted?
- *Tilt Responses*: When you feel tilted, what do you do?
- *Perceptions of Malleability*: Do you think you can change how easily you get tilted?

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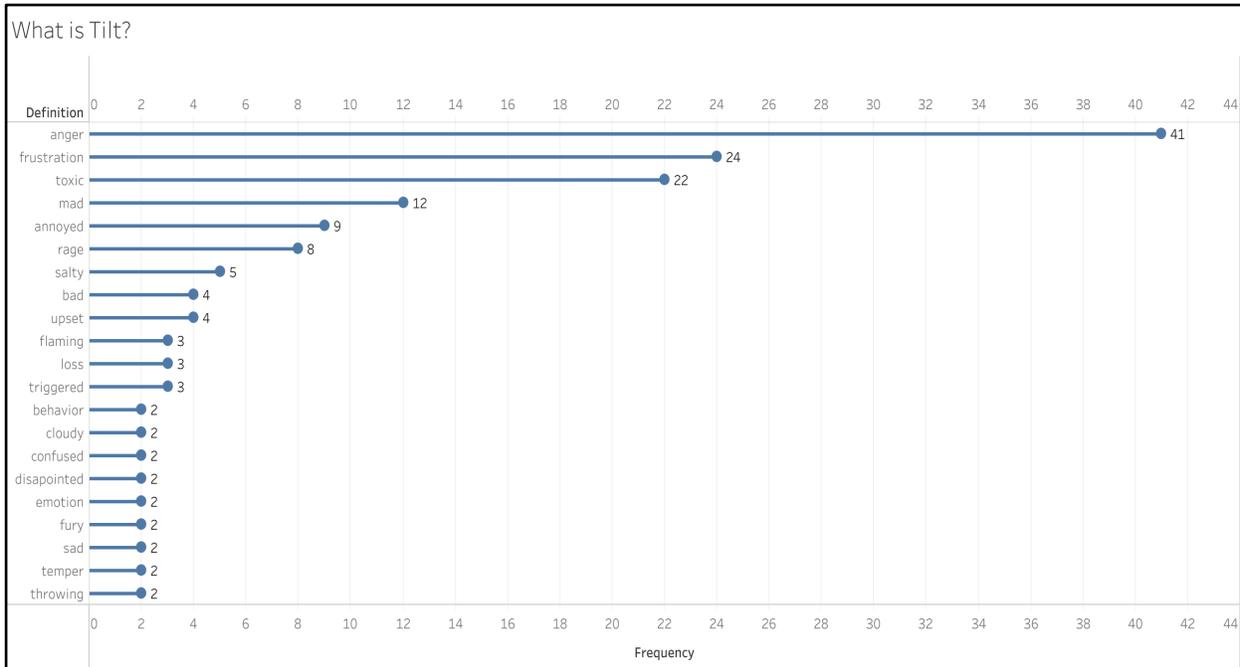
A total of 95 students participated in the survey. Responses containing multiple answers to a given prompt were broken down into separate propositional units before coding, resulting in a data corpus comprised of n=124 propositions total. Codes were developed using an inductive or grounded theory (Glaser & Strauss, 1967) approach given the exploratory nature of the study. Two researchers coded all response data independently, then met to discuss and resolve any discrepancies. Each code was then examined for internal consistency as a check for coding drift and errors. Responses that were indecipherable, ambiguous, or off-topic were categorized as “uncodable” and removed before analysis; 3 propositions total were thus removed.

As a way to confirm and triangulate patterns found in the student survey data, 8 staff members (7 general managers and 1 coach) were interviewed on Discord by a member of the research team about behaviors they observed in their students regarding tilt and strategies they had for building students’ self-regulation skills. Interviews were transcribed and thematically analyzed by three researchers.

## Results

### Tilt Definitions

Our first question was to understand how students themselves define tilt. Tilt as a term originated from pinball, where frustrated players would hit the machine; the pinball machine would flash “tilt” and the game would be over (Duncan, 2015). The construct of tilt was adopted by the poker community when Browne (1989) used tilt as an explanation for why poker players would continue to play despite heavy losses and make increasingly poor decisions. In physical sports, being “on tilt” is associated with gambling and poor money management rather than actual play. As adapted to esports, tilt is primarily associated with frustration and rage while playing but can be used more broadly as an emotional reaction to in-game events that cause a deterioration in gameplay. Tilt is a relatively new construct to esports then, so our first task in this study was to better understand how students in our program conceptualized it. Figure 1 below gives frequency counts for student responses to the first survey question, “What are some words you associate with tilt?” Word families (such as *anger* and *angry*) are pooled, and responses with a frequency of 1 are omitted.



**Figure 1.** Student definitions of tilt.

The emotions *anger*, *frustration*, and *toxicity* are students’ most frequent associations with *tilt*, with similar emotions *mad*, *annoyed*, and *rage* the second most frequent group of associations. Thus, students’ definitions are in keeping with the word’s current usage within the context of esports, with negative “emotional reaction” at the construct’s core. As we go down in response frequency, we see the “deterioration of gameplay” component also enter into its meaning – here, both cognitive (*cloudy*, *confused*) and behavioral (*throwing*).

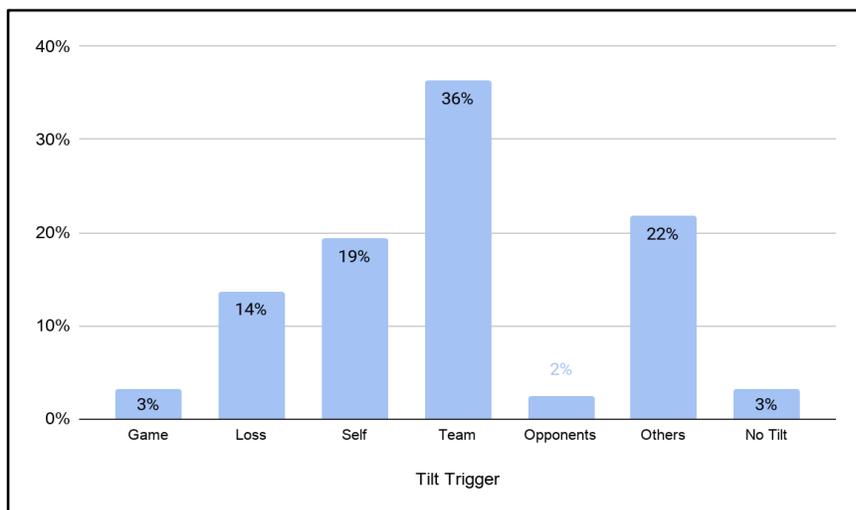
### Tilt Triggers

When students were asked what triggers them to tilt, their most common (modal) answer is *their team members* (36% of responses). Answers that fell into this category include examples such as “bad and trolling teammates,” “not having a communicative team,” and “my team making obvious mistakes”. The second most prevalent response (22%) was *other players* in general (coded as simply “others”), without specification of their role or relationship. Example answers here include “other people flaming or [badmouthing] me,” “toxic players” and people using particular tactics such as “campers” and “spammers.” Opponent players, on the other hand, were reported as the tilt trigger only 2% of the time. Thus, while other players appear to be the primary cause of tilt among students surveyed, it was predominantly not *competitive* players that tilted players, but *collaborative* ones.

Beyond the frustrations caused by other players, *self* was the next most frequently cited tilt trigger. Nearly one-fifth (19%) of students surveyed reported that frustration or disappointment with their own gameplay performance was a primary tilt factor. Responses in this category include “dying to something that I shouldn’t have, or doing something that I know is wrong but still [doing] it,”

“messing up,” and “my own mistakes.” Such self-tilt may be reflective of the narrow esports context alone or may well be part of the current stress and anxiety epidemic among teenagers in the US and pressures to excel (PEW Research Center, 2019).

Finally, *losing* (14% of responses) a match (or a string of matches) and issues with the *game* itself (3% of responses) were the lowest reported tilt triggers. Responses categorized as *loss* include examples such as “losing seemingly easy victories” and “repeat losses.” Responses categorized as *game* include “unbalanced/untested game mechanics” and “when my controller doesn't seem to be responding.” Thus, while loss conditions and the game are sometimes *the context* of tilt episodes, they are not as often seen as triggers for tilting in and of themselves.



**Figure 2.** Student self-reported tilt triggers.

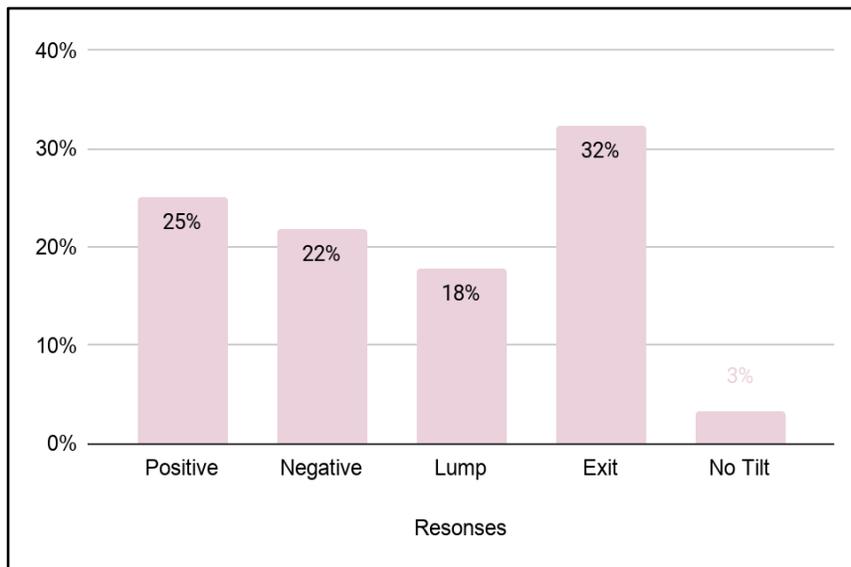
### Tilt Responses

When students were asked how they responded after tilt was triggered, their most common (modal) answer was to *exit* the game (32% of responses). Example responses in this category include “stop playing” and “take a break.” Exiting the game is a productive and appropriate strategy, frequently recommended in popular online media as a way to stop tilt and Browne (1989) calls it the preferred method of break-even poker players.

The second most common responses to tilt were also, in fact, *positive*. One-fourth (25%) of students, in response to tilting, applied a productive strategy other than simply exiting. Examples include “calm[ing] myself down while focusing on the game,” “calm[ing] down,” and “try[ing] to smile.” Five respondents not only self-regulated in response to tilt triggers but also attempted to learn from it or, in the words of one student, “try and figure out what went wrong.”

Yet, nearly the same proportion of students surveyed or 22% admitted to decidedly *negative* responses to tilt, including actions such as “scream/ yell” “get mad, flame” and “smash my desk.” Thus, tilt remains an area where additional progress can be made.

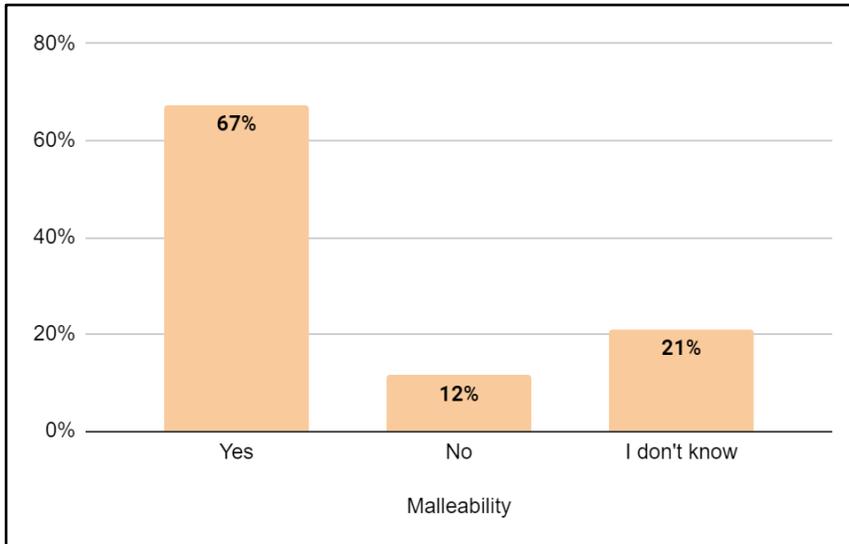
The remaining 18% of players reporting tilt had neither a positive or negative approach to tilt but simply opted to do nothing. We coded such non-responses as *lump*, a term drawn from the business literature to refer to employees willing to “take their lumps” and simply accept bad things that happen to them (Barkan, 2015) Example responses include “talk less,” “play more games” and “nothing.” Lumping is neither good or bad in itself, although simply tolerating triggers does little to address the source or the outcome.



**Figure 3.** Student self-reported responses to tilt.

### Perceptions of Malleability

Finally, participants were also asked if they thought they could *change* how easily they get tilted. The modal answer was *yes* (67% of responses), indicating that indeed students do see tilt was something malleable and therefore, by inference, able to be improved. Roughly one-fifth (21%) of students responded that they *do not know* whether tilt is changeable. Only 12% responded *no*, that tilt is not changed and, by extension, could not be addressed. This belief in malleable versus fixed emotional volatility is, perhaps in some way, the affective equivalent to the notion of fixed versus growth mindset (Dweck, 1975).



**Figure 4.** Student perceptions of the malleability of tilt.

### Relationships between Variables

Are tilt triggers, tilt responses, and perceptions of tilt’s malleability related? One might reasonably expect that different tilt triggers elicit different responses and that one’s beliefs about how fixed versus malleable tilt might shape one’s responses to different triggers, be they game, loss, self, or other people. These expectations are represented by the following hypotheses:

**H1.** Different types of triggers elicit different types of responses. (Tilt Trigger → Tilt Response)

**H2.** One’s beliefs about tilt’s malleability determine how one responds to tilt.  
(Perception of Malleability → Tilt Response)

To test these hypotheses, we cleaned the data and then tested each relationship using Lambda ( $\lambda$ ). No *tilt* responses ( $n=4$ ) were removed to allow us to test only those responses in which tilt was reportedly present. For the variable *tilt trigger*, we then combined *team*, *opponents*, and *others* into a single new category *people* to reduce the number of empty cells. Lambda was used to measure the association of each pair of variables above, corresponding to our two hypotheses. Lambda values range from 0.0 (no relationship) to 1.0 (perfect relationship) with weak associations ranging from 0.01 – 0.09, moderate associations ranging from 0.10 – 0.29, and strong associations ranging from 0.30 – 0.99 (Babbie, Wagner, & Zaino, 2019). Resulting test statistics and p-value for each relationship are shown in Table 1 below. Both relationships are significant ( $p$ -values < 0.05) and strong ( $\lambda > 0.30$ ).

**Table 1.** Each hypothesized relationship tested with resulting lambda and p-value.

Cause (IV) → Effect (DV)	Lambda ( λ )	p-value
Tilt Trigger → Tilt Response	0.375 (strong)	0.000
Perception of Malleability → Tilt Response	0.342 (strong)	0.000

**H1. Tilt Trigger → Tilt Response**

As to the hypothesis that the type of trigger impacts how one responds to it, our data show that, indeed, different tilt triggers lead to different strategies. As shown in Table 2 below, the predominant response when *the game* triggers tilt is to simply exit (75%). The predominant response when a *loss* triggers tilt is either simply exiting (35%) or overtly negative (yelling, throwing things, etc) (41%). When one’s own *self-performance* triggers tilt, we see more variation in responses but simply exiting and overtly negative responses equally dominate (42% and 42% respectively). But when the tilt trigger is *other people*, the predominant response shifts to positive (33%), followed by simply exiting (28%), putting up with it (lump) (25%), and last and only least acting out (*negative response*) (13%). Based on these data, it seems that players’ harshest responses are reserved for oneself while one’s best efforts at containing the frustration are reserved for other people.

**Table 2.** Tilt Response as an Effect of Tilt Trigger

Tilt Response	Tilt Trigger				120
	Game	Loss	Self	People	
Positive	25%	18%	8%	33%	
Negative	0%	41%	42%	13%	
Lump	0%	6%	8%	25%	
Exit	75%	35%	42%	28%	
	4	17	24	75	

**H2. Perception of Malleability → Tilt Response**

As to the second hypothesis, our data show that indeed one’s beliefs about whether or not tilt is malleable determine how one responds. As shown in Table 3 below, different perceptions of malleability lead to different tilt responses. Players who believe tilt malleable reported positive tilt

responses more than players who believed otherwise (31% positive versus 0% negative and 15% uncertain). Players who believed tilt is fixed reported negative tilt responses more than other players (36% versus 27% and 27% respectively). Players chose lumping and exit strategies roughly equally, regardless of their beliefs about tilt. Therefore, we conclude that perceiving tilt as malleable has a positive effect on how players respond when tilted, leading them to choose more positive responses to tilt overall.

**Table 3.** Tilt Response as an Effect of Perceptions of Tilt Malleability

Tilt Responses	Perceptions of Malleability		
	Yes (Malleable)	No (Not Malleable)	I Don't Know
Positive	31%	0%	15%
Negative	18%	36%	27%
Lump	20%	27%	15%
Exit	31%	27%	38%
	87	8	25
			120

### Relationships Among All 3 Variables

But what are the relationships among *tilt triggers*, *tilt responses*, and *perceptions of malleability*? In order to examine the interrelationships among all three variables, we constructed partial tables of the zero-order relationship “Tilt Trigger → Tilt Response” (shown in Table 2) within each level of the test variable *Perceptions of Malleability* – in effect, holding our test variable constant to examine the relationship between *tilt trigger* and *tilt response* at each level of the test variable: belief that tilt is malleable, believe that tilt is not malleable, and uncertainty (i.e. *I don't know*). The partial tables are shown in Table 4 below.

**Table 4.** [Tilt Trigger → Tilt Response] under each of Levels of Perceptions of Tilt Malleability

		Tilt is Malleable				Tilt is Fixed				I Don't Know			
Tilt Response	Tilt Trigger	Tilt Trigger				Tilt Trigger				Tilt Trigger			
		Game	Loss	Self	People	Game	Loss	Self	People	Game	Loss	Self	People
+		50%	27%	11%	38%	0%	0%	0%	0%	0%	0%	0%	31%
-		0%	27%	39%	11%	0%	50%	0%	50%	0%	75%	50%	8%
Lump		0%	9%	11%	25%	0%	0%	0%	17%	0%	0%	0%	31%
Exit		50%	36%	39%	27%	0%	50%	0%	33%	100%	25%	50%	31%
		2	11	18	56	0	2	0	6	2	4	6	13

Examination of the partial tables reveals an important pattern. Perceptions of malleability specify the conditions under which different tilt triggers result in different tilt responses. If you believe that tilt is malleable, then responses shift toward *positive* and *exiting* when it's the game or a match loss that triggers you. In other words, perceiving tilt as malleable amplifies positive responses, even when the trigger can't feel hurt or harm from what you do. If you believe that tilt is fixed, then strategies shift from tilt responses that avoid abusiveness (here, positive responses, lumping, and exit strategies) to *negative* responses and exiting when it's other people who trigger you. In other words, perceiving tilt as fixed seems to amplify negative strategies toward others, perhaps resulting in a kind of “not my fault if I hurt you, I can't help it” sort of attitude. When you yourself are the trigger, your beliefs about the malleability of tilt make no difference in how you respond. More productive beliefs about tilt's malleability does not protect you for the likelihood of negative responsiveness, self-talk, and reactivity.

### Implications

These findings remain preliminary but their implications for program development and intervention are deep. First, students are tilted most commonly by their own teammates, suggesting that interventions designed to target and promote *team communication* and *collaboration skills* may be one potent way to address and potentially ameliorate tilt triggers themselves. Such skills obviously extend beyond competitive gaming, yet competitive gaming offers a key arena for their development. As one general manager (GM) interviewed for this study recognized, “collaboration is a huge part of [communication]. That's one big thing that we don't always get to address in the classroom...but a majority of the games that are out there for esports – it is a huge team effort to get that tournament win” (Staff 7, p.13).

Second, students are also heavily tilted by *their own performances*. In fact, based on these data, it seems that players' harshest responses are reserved for themselves while their best efforts at containing the frustration are reserved for other people. Given the current problem of stress and anxiety among high school teenagers in the US and reported pressure to excel (PEW Research Center, 2019), tilt in response to one's own actions and performance may well offer teachable moments in which GMs and Coaches might remediate self-judgment, negative self-talk, and stress. This self-reproach is left wholly undiscussed and unaddressed in esports and education; efforts targeting wellness and self-care in these areas hold some promise in addressing toxicity online by first addressing toxicity toward oneself.

Regardless, negative responses to tilt – “getting toxic and smashing my desk,” “slamming my fist on the table, sometimes slamming my mouse,” “getting angry and frustrated at the game / myself,” “ranting and get mad,” “critiquing my friends when I spectate,” “flaming,” “screaming,” “yelling,” “cussing people out,” “blaming others,” “yelling a lot and hitting things” – are still almost as common as positive responses, so there is much work left to do. In our view, the solution is not banning esports but remediating them. In the words of one staffer interviewed:  
A lot of our kids haven't been coached in any kind of activity before so they don't really know how to be good losers because they've been brought up by the internet and they tend to be toxic when they start losing or even when they're winning. And I think esports...especially esports clubs in high school and middle school, can really help teach gamers how to game correctly and game properly and be good citizens in the world rather than just having them learn from the other toxic people on the internet.” (Staff 8, p. 15)

Fortunately, most students do believe that one's tiltability is indeed malleable, that whether and how significantly one tilts can be changed. Our evidence suggests that perceiving tilt as malleable has a positive effect on how players respond when tilted, leading them to choose more positive responses to tilt overall. Perceiving tilt as fixed, however, has the opposite effect, tamping down productive responses to tilt and amping up more negative and abusive strategies toward other players who perhaps triggered it. Here, belief in malleable versus fixed emotional volatility is somewhat similar to the notion of fixed versus growth mindset (Dweck, 1975): How you view tilt's changeability may predict how well you hold yourself accountable to your reactions online.

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