

## Can We Expect More Students Dropping out of Education to Play Poker or Has Online Poker Become too Challenging?

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### Abstract

Poker is a popular game, especially among male students. It is known to be highly time-consuming and might lead to players dropping out from education. Yet little is known about why it is so time-consuming. In this article, it is argued that developing and maintaining the requisite skill in poker is a continually ongoing process and the game is highly competitive. If a player is not capable of improving at the same or a higher rate as his or her opponents, that person will be bound to lose in the long run. Twelve young poker players and three “old-timers” were interviewed about changes in online poker and problems with combining poker and education. A thematic analysis was used, which concluded that prioritizing between poker and education can be understood in terms of a weight balance; if a student makes enough money from poker, then quitting school seems like a rational choice. If poker income decreases, then education becomes more important. Several of the informants have found themselves having to choose between poker and education. This study argues that poker has become more competitive and less popular in the last five years, making it harder to succeed as a professional player. Several of the informants described the poker population as more homogenous and with a higher level of skill than before. This, they claim, makes the game less profitable for the best players and that might reduce a student’s inclination to drop out of education.

**Keywords:** poker, dropout, education, excessive gambling, qualitative study

### Résumé

Le poker est un jeu populaire, particulièrement auprès des étudiants masculins. On sait qu’on peut y consacrer beaucoup de temps et que ce jeu peut même mener à l’abandon des études. On s’explique pourtant mal les raisons pour lesquelles les joueurs y consacrent tant de temps. Dans cet article, on explique que ce jeu est très compétitif et que pour maintenir et développer ses compétences, il faut s’y adonner de manière assidue. Si un joueur ne parvient pas à s’améliorer au même rythme que celui de ses adversaires ou à un rythme plus rapide, il perdra à long terme.

Douze jeunes joueurs de poker et trois « vétérans » ont été sondés sur les changements dans le poker en ligne et les problèmes liés à la combinaison poker et études. On a utilisé une analyse thématique qui a permis de conclure que les priorités entre le poker et les études peuvent être comprises sur le plan de l'équilibre; si, par exemple, un étudiant fait assez d'argent au poker, quitter l'école semble alors être un choix rationnel. Si au contraire le revenu au poker diminue, les études deviennent alors plus importantes. Plusieurs personnes sondées ont révélé avoir eu à choisir entre le poker et les études. Cette étude fait aussi valoir que le poker est plus compétitif et moins populaire depuis les cinq dernières années, ce qui rend la réussite comme joueur professionnel d'autant plus difficile. Plusieurs ont décrit la population de joueurs comme étant plus homogène et ayant un niveau de compétence plus élevé qu'avant. Selon les répondants, le jeu serait devenu moins rentable pour les meilleurs joueurs, diminuant ainsi l'envie d'un étudiant d'abandonner ses études.

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### **Introduction**

Hardy (2006) describes a proliferation of poker in American colleges, with several students playing poker 10 hours or more a day, thereby leading to them falling behind in their classes. Several reports from both universities and colleges indicate the presence of a “poker craze,” one in which many of their students spend an excessive amount of time on poker (Brown, 2006; Hardy, 2006; McComb & Hanson, 2009). The “poker craze,” “poker boom” or “Moneymaker effect” all refer to the rapid rise of popularity poker had from 2003 to 2010. It all started in 2003 when the unknown amateur player Chris Moneymaker surprisingly won the most media-coveted and prestigious annual poker tournament, the World Series of Poker (WSOP) Main Event. From 2003 to 2006, global Internet poker revenues grew from US\$365 million to US\$2.4 billion (Monaghan, 2008) and it continued to grow to US \$4.99 billion in 2010 (Cook, 2016). A massive increase in live poker playing also took place. In a representative study of 2,139 Canadian full time undergraduate students, 366 (19.5%) had played poker within the previous year. Mihaylova, Kairouz and Nadeau (2013) conducted an analysis of these 366 poker players, in which they divided the players into two groups: those that had played only live poker (80%) and those that had played both online and live or only online (20%). Those that had played online experienced more educational problems and played at a higher frequency than those that only played live poker (Mihaylova et al., 2013). In a recent study of 909 college students from California, 47% of the male and 15% of the female students reported having played poker for money the previous year, making poker the most popular form of gambling among students (Shead, Derevensky, Fong & Gupta, 2012). As in the Canadian study, 80% of the poker players had only played live poker, nevertheless, 10% of the students considered online poker as a major problem among their peers (Shead et al., 2012). This finding shows us that, although live poker may be the more common, online poker may nevertheless be more related

to problematic gambling. Mihaylova et al. (2013) argues that the “poker craze” may lead to university students dropping out of school, thus creating a need for school prevention programs. According to Gupta & Derevensky (2008), the media are presenting poker tournaments as a sport, and among adolescents, the winners are seen as cult heroes. This might amplify the students view on poker as an alternative to education.

From 2008 and the following four years, the WSOP Main Event was won by players who had dropped out of college to become professional poker players a few years before their successes. Each of them received more than 8.5 million US dollars (in prize money). In 2008, Peter Eastgate (22) from Denmark won the tournament (Garcia, 2008). The following year the American Joe Cada (21) was the winner, leading to the newspaper *Dawn* to use as its heading for the story: “College dropout wins \$8.5 Mn” (2009). After a 23-year-old Canadian player finished in first place in 2010, a pokersite wrote: “The success of Jonathan Duhamel is proof that poker offers a chance for young people who want to make a decent living without attending college” (“Poker and the doors,” n.d.). The next year Bond (2011) from Dailymail reported that the 22-year-old German champion Pius Heinz almost quit the game to return to college before winning the bracelet, and in 2012 a similar “successful dropout story” was told by the American winner Greg Merson (26) to *The Washington Post* (Rosenwald, 2012; see also “Greg Merson wins,” 2012). Ryan Riess (23) from the United States broke the five-year-long consecutive winning strike of college dropouts in 2013. When asked if he ever planned to put his bachelor’s degree to work, he stated that he never even considered it because he had always known he was set to become a professional poker player (Willems, 2013; see also Slagter, 2013). The goal of this paper is to determine the probability by which we are set to see an increase or a decrease in the number of future students dropping out of post-secondary education to play poker.

Biolcati, Passini, & Griffiths, (2015, p. 19) describes online poker as one of the fastest growing forms of online gambling which have become increasingly more popular the last decade. However, statistics from online poker sites suggest that online poker has declined significantly after 2010 (Cook, 2016). I will address the reason for the decline in online poker later in the article.

This study aims to discuss whether online poker has become more competitive and less popular, thus making it harder to succeed as a professional player. It is therefore hypothesized that a decreasing number of students will drop out of college or university to play poker. Four young professional poker players, eight young amateur players, and three “old-timers” were interviewed as part of this study. The aim was to determine if young players were in fact struggling to combine playing poker with earning an education, and how the poker environment has changed during the last decade.

This article will discuss three questions:

- How do young poker players describe balancing studying and playing poker?

- Have they experienced changes in online poker?
- Do changes in online poker influence a student's inclination to drop out of education?

### **Poker is highly time consuming**

In a game of poker, the result is greatly affected by the element of skill (Bouju, Grall-Bronnec, Quistrebert-Davanne, Hardouin, & Venisse, 2013; A. Parke, Griffiths, & J. Parke, 2005). The skill element and the way the betting is organized together make it possible for some players to win in the long run unlike most forms of gambling (Bjerg, 2010; Laakasuo, Palomäki, & Salmela, 2015; McCormack & Griffiths, 2011).

This is one of the main motivations for the players, but to develop these skills in poker requires substantial invested time than any other form of gambling (Laakasuo et al., 2015; Moreau, Chabrol, & Chauchard, 2016; Recher & Griffiths, 2012). As a result several studies have showed that poker may produce a new type of problem gambler, one who does not struggle financially, but instead spend so much time on poker that other parts of their life is affected, such as work, their relationships with others, and their education (Barrault, Untas, & Varescon, 2014; Biolcati et al., 2015; Bjerg, 2010; Griffiths, Parke, Wood, & Rigbye, 2010; Hing, Holdsworth, Tiyce, & Breen, 2014; Hing, Russell, Blaszczynski, & Gainsbury, 2015; Hopley & Nicki, 2010; Laakasuo et al., 2015; Shead, Hodgins, & Scharf, 2008). We have more knowledge of poker players with gambling problems than successful poker players. Treatment centers in Denmark report an increase of young poker players in need of treatment from virtually no patients in 2003 to 33% of their patients in 2009 (Bjerg, 2010). In a French survey 20% of the patients in a gambling treatment center were poker players, including 75% of the online players (Venisse & Grall-Bronnec, as cited in Moreau et al., 2016).

A survey of 179 online poker players (Hopley & Nicki, 2010), a qualitative study of 12 regular offline poker players (Vines & Linders, 2016), and a study of a high earning sub group of 31 online poker players (Hopley, Wagner, & Nicki, 2014) all found that the average player spent more than 30 hours a week on poker. Even though studies have shown that playing poker may be highly time-consuming and therefore affect the player's education (Biolcati et al., 2015; Bjerg, 2010; Griffiths et al., 2010; Hing et al., 2014), little is known about why poker is so time-consuming and how the poker players themselves describe their struggle to combine their studies with gambling.

### **Black Friday caused a decline in online poker**

On April 15, 2011 the United States Department of Justice shut down some of the world's largest poker sites and made it impossible for players living in the United States to play online, poker players referred to this as "Black Friday" (Chumbley, 2012). Before black Friday the U.S. was by far the largest market for online poker

(Fiedler, 2013). This led to a massive decline in the number of online poker players and an international declining confidence in the online poker sites. Globally, the Internet poker gross gaming yield has declined from \$4.99 billion 2010 to \$3.87 billion 2014. The results for 2016 is expected to be \$3.53 billion (Cook, 2016; see also DellaFave, 2016).

### **A game with high variance**

Palomäki, Laakasuo, & Salmela (2013) describes poker as a game with a very high variance. Over the long run the luck evens out and skill determines which players end up as successful (Palafox, 2016). However, in a short period of time, “luck” plays a huge part and feeling unlucky can be emotionally devastating (Palomäki et al., 2013; Palomäki, Laakasuo, & Salmela, 2012). The element of variance makes it harder for players to determine their own and other players’ skill level. A losing player may believe that he or she is just unlucky (MacKay, Bard, Bowling, & Hodgins, 2014). Boutin (as cited in Challet-Bouju et al., 2015 p. 210) illustrates that the impact of chance/variance is greatly affected by the skill gap between the players. When the players are evenly matched, chance becomes the dominant factor, but when there is a large skill gap, chance does not influence the results to the same extent. Since the opponents may improve their skills and their ability may vary from day to day, the game becomes more unpredictable.

## **Method**

### **Participants**

Four current or former young adult professional poker players, eight amateur young adult poker players, and three “old-timers” from different parts of Norway were interviewed using an exploratory qualitative interview study. All the participants have played poker for several years. They were recruited either through direct contact (all the “old-timers” and one of the poker professionals), advertisements during the first legal poker tournament in Norway with a cash prize (2015)<sup>1</sup>, a Norwegian poker forum on the Internet, or snowball sampling. All the participants were male and all the interviews were conducted in Norwegian.

The term *old-timer* is used to differentiate them from newcomers, and emphasize their identity as experienced practitioners with a central position in the poker environment (see Lave, 1991, p. 68). These are part of a large network of poker players and combined they have experience from playing professionally before the “poker boom,” operating illegal poker clubs and discussion with most if not all of the famous

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<sup>1</sup>In Norway it is not illegal to play online poker although several attempts are made to make it difficult for the players to transfer money to poker sites. Live poker—that is, for real money—is illegal. In 2015, two exceptions to the rule was made: one annual national tournament was legalized, and private tournaments with a maximum of ten players and a modest buy-in (approximately USD \$115 per player) was allowed (for details see “Gaming in Norway,” 2017).

Norwegian players. The 3 “old-timers” ranged in age from  $> 35$  to  $< 50$  years, the 12 young poker players ranged in age between 20 and 30 with an average age of 25.5. The young players were categorized as professionals if they had had poker as their only income for over a year and earned a profit of more than USD \$100 000 from playing. If they did not meet these criteria, they were categorized as amateurs. All the informants had played Texas Hold'em extensively, but some of them had changed to a similar game named Omaha. One of the “old-timers” preferred other poker variants, but had significant experience in Texas Hold'em. Texas Hold'em is the most played form of poker and considered relatively easy to learn. Omaha has a bit more complexity and higher variance.

### **Data Collection**

The interview guide consisted of twelve themes: the interviewees' (1) introduction to poker, (2) preferred stakes format and frequency, (3) learning process and strategies, (4) potential problems related to playing, (5) online poker experience, (6) live poker experience, (7) intra game experience, (8) poker community, (9) combining poker with the life outside, (10) future poker expectations, (11) defining poker related concepts, and (12) closing remarks. Among the questions about potential problems and the combination of poker with the life outside (4) and (9), the balance between poker and education was especially emphasized. The interview was semi-directive, and its aim was to provoke the informants to talk spontaneously and to describe naturally as many of the aspects as possible, rather than letting the conversation be determined by the order of the interview questions.

After two pilot interviews minor adjustments were made in the interview guide and a few additional adjustments were made through the data collection. The first interview took place in October 2015 and the last in July 2016. Six of the interviews were conducted at the University of Oslo, six by telephone, and the last three at the informant's workplace, the informant's home, and the author's home, respectively. Although the possibility cannot be excluded, there were no findings to indicate systematic differences in responses dependent on the interview location.

The interviews lasted for an average of 121 minutes. The shortest interview was 52 minutes and the longest 203 minutes.

### **Data Analysis**

All the interviews were conducted and fully transcribed by the author. The whole corpus was 253,162 words with an average of 16,877 words per interview. The study was conducted after approval from the Norwegian Centre for Research Data (NSD), which is responsible for enforcing ethical guidelines. To gain an informed consent, all of the informants received an information sheet prior to the interview, which was either signed (face-to-face interview) or received verbal consent (phone interviews). All informants consented to an audio recording of the interview, and were invited to read through the transcriptions after the interview and to make comments.

In fact, three of the informants wanted to read the transcription, but none of the informants chose to provide comments. The informants did not receive any compensation for participating in the study. The program HyperTRANSCRIBE (version 1.6) was used for transcription and HyperRESEARCH (version 3.7.3) was used for analysis the data.

The interviews were then analyzed using thematic analysis (TA). This analysis is a method that aims at identifying, analyzing, and reporting the underlying themes within data (Braun & Clarke, 2006). The goal was to capture systematically important components within the data, and detect the patterned response. With TA, it is recommended that, during the coding, the researcher move back and forth between the data set and the coded extracts of data. This process can be performed either inductively (developing categories from the texts) or deductively (creating categories based on theoretical knowledge in the research field). A theme or code captures something important to the research question, and what is captured does not have to be dominant to be important. The aim of the study, and not the frequency, determines what is regarded as relevant (Braun & Clarke, 2006). Seven major themes and a total of 50 sub-themes were constructed. The majority of the major themes were constructed deductively and the majority of the sub-themes were conducted inductively. In addition, the informant's story went through a simple narrative analysis. This component of our method helped to determine changes in the poker economy and whether different players face the same challenges at different times.

The steps used in the TA in this study were inspired by Recher & Griffiths (2012) and Braun & Clarke (2006), but it also had a simple narrative approach (Riessman, 1993): (1) data transcription, (2) data familiarization, (3) short presentation of the informant's story using a simple narrative approach, (4) initial codes creation, (5) themes search, (6) themes review, and definition and naming of themes, and (7) report production.

The themes that are emphasized for this article are: (1) balance between poker and education, (2) volume, (3) personal story, (4) changes in online poker, (5) push and pull factors towards poker, (6) push and pull factors away from poker, and (7) poker versus education as weight scale. Each of the seven themes is described immediately below.

- (1) **Balance between poker and education:** This theme is the extent to which the informant believes that playing poker has led to him or her (a) being tired at school, (b) being absent from school, (c) not having enough time to study, or (d) dropping out of education, and how the informant reflects on combining playing poker with earning an education.
- (2) **Volume:** This theme is the amount of poker experience. Playing more will result in greater volume. Yet volume is not equal to time because playing poker online proceeds faster, especially when playing several tables at once.
- (3) **Personal story:** This theme is the informant's individual poker stories: (a) when he played poker for the first time, (b) when he decided to take poker seriously, (c) and how his career had subsequently developed.

- (4) **Changes in online poker:** This theme is how the informants describe changes over time in poker. Specifically, it addresses (a) how difficult it is to win money online, (b) how many players play online, (c) structural changes, or (d) changes in poker software.
- (5) **Push and pull factors towards poker:** Both long-term and short-term effects are identified.
- (6) **Push and pull factors away from poker:** Both long-term and short-term effects are identified.
- (7) **Poker versus education as weight scale:** The results are summarized in a model that describes the balance between playing poker or focusing on education as a weight scale, with push and pull factors described for both sides.

## Results

### Descriptive data and thematic choices

Among the twelve young poker players, four had or had had poker as their only income. This group was referred to as the *professional players*; the other group of eight was referred to as the *amateur players*. In Table 1, the groups and the pseudonyms of their respective members are presented, along with (1) each member's age, (2) the year the member started playing poker regularly, (3) each member's estimation of financial result from poker, and (4) to what degree time spent on poker has affected the player's education in high school and university.

The "old-timers" were accustomed to seeing changes over time in the poker world. They described how online poker was in the beginning and how the Norwegian and international poker environment subsequently developed. Oliver had a broad experience from poker and from several different games. He had been both an organizer and an amateur player. Oscar and Otto were former professional players and had played online and offline from before the poker boom.

Among the informants only Oliver reported having lost money in poker. Adam and Andy were a bit better in this regard than "break-even" players, and most of the informants claim that they had have made USD \$5,000–45,000. The four professionals and one of the "old-timers" all reported having won more than \$500,000.

### Combining Poker with Education

Among the young players, 9 out of 12 had started on a bachelor's degree. Alfred (25) was missing a few courses from high school. Andy (20) and Arthur (26) had not yet started on a bachelor's degree but are planning to begin in a few years. Alfred played poker frequently during high school, both online on his computer during class and in his spare time. Nevertheless he claimed that poker had nothing to do with his dropping out of school.

All of the informants that have started on a bachelor's degree reported that poker in some way had affected their studies. For certain informants poker had had just a

Table 1  
*Presentation of the informants*

	Name	Age	Started playing seriously	Income/loss \$ overall	Current/former professional poker player	Education affected high school	Education affected university	Interview location
Young professional players	Paul	30	2005	+ Ca 0.5 M	Current	No	Major	Telephone
	Peter	29	2004	> + 1 M	Former	No	Pause	University
	Patrick	28	2004	> + 0.5 M	Current	Minor	Pause	University
	Pierre	27	2006	> + 1 M	Current	Pause	End	Telephone
Young amateur players	Adam	30	2002	> + 0	No	Major	End	University
	Aaron	28	2005	Ca + 45 000	No	No	Pause	His Office
	Arthur	26	2005	Ca + 10 000	No	No	Not started	Telephone
	Alfred	25*	2009	> 0 (WNC')	No	Major	Not started	Telephone
	Andrew	23	2010	> + 10 000	No	No	Pause	Telephone
	Austin	23	2008	> + 5 000	No	No	Minor	Telephone
	Alex	21	2012	Ca + 20 000	No	No	Major	Author's home
	Andy	20	2013	> + 0	No	No	Not started	University
	Oscar	>40	1999	> + 0.5 M	Former	No	No	University
	Otto	>40	2002	WNC'	Former	No	No	His home
Oliver	>35	2005	Ca - 50 000	No	No	Minor	University	

\* Alfred wouldn't reveal his age precisely but CLAIMED that it was between 20 and 30; to calculate a mean value he was given the age of 25. 'WNC = Would Not Comment. All the professionals are given a name that starts with the letter P, the amateurs A, and the "old-timers" O. M=million (1 000 000) Ca=circa, approximately.

minor effect, but for others it led to them taking a pause or to drop out from their studies. A *minor* effect was typified as when the informant was unsure of whether poker has had an effect on education but nevertheless agrees that he had lost sleep and possibly skipped some homework because of poker. If the informant thought his grades would have been significantly better or his absences from school lower if he did not play poker it is then regarded as a *major* effect. *Pause* is if the informant claimed that he had taken a break or been delayed for at least one semester because of poker, but had since gone back and completed his planned education. *End* is if the informant had interrupted his education because of poker, and was not planning to resume his studies in the near future.

Several participants have found themselves in a dilemma where they had to choose between poker and education. We will first see how the poker professionals describe this process.

Paul (30) claimed that poker produced a major effect on his studies when he was a bachelor's student (around 2005). He was somewhat tempted at that time to quit school and become a poker pro but his "ferocious" parents demanded that he finish his university degree. After he finished his bachelor's degree, he did, in fact, become a full-time poker player. Today Paul regrets that he finished his degree in the "golden days of poker"<sup>2</sup> when many of his friends made substantial money playing poker. He claimed that online poker had changed extensively and dropping out today was completely different from how it used to be. Paul thought that his grades could have been meaningfully better if he had not invested so much time in poker.

Peter (29) had had the same dilemma as Paul (in around 2008), but he came to the opposite conclusion. He decided to quit school to become a professional poker player.

Peter: Well, I almost never showed up at school. Only once in a while. I did try to be there for the mandatory stuff. If I was playing well, I almost never bothered to go. This one guy I lived with attended the same study program, but we weren't exactly good at backing each other when it came to school, and we didn't need a good excuse to stay at home. So we stayed at home playing instead, and then I was at school a little. But not enough, really.

Peter estimated that he played at least 40 hours a week during this period. Even though he made a substantial amount of money, he nevertheless had tried to resume his studies several times, yet every time he ended up dropping out. He had had two main reasons for choosing poker over education: one was a strong almost physical urge to play, and the other a calmer and more calculated feeling of financial possibility:

Peter: There was this urge that you had to try again. And I thought about "milking the cow." I was conscious about that. To play a lot now because

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<sup>2</sup>"The golden days of poker" is an expression used by several of the informants which refers to "when it was easy to make money playing poker online." The expression argues that, starting in 2003, after the poker boom, many of the players had inexpedient strategies. It is not totally clear exactly when "the golden days of poker" ended.

I knew that it wouldn't last. So trying to play a lot now because the plan was to start studying again when I stopped winning.

Pierre (27) started playing seriously in approximately 2006, when he was a high school student. He used to play about six to seven hours a day, four to five times a week, and since he played during the night, school became a challenge. As a result, he failed to finish one of his subjects and had to continue as a part-time poker player and part-time student. When selecting a bachelor's course, he wanted something that he could use to improve his poker skills. After a meeting with a student counselor he decided to study part-time over six years instead of three. He finished the first four years and then decided to quit school and play poker full time since so much money could be made.

The last poker pro is Patrick (28). Patrick stated that he was among the best students at his school when he attended junior high. But when he started high school he was suddenly a mediocre student.

Patrick: And there I stayed for three years and nothing really changed while playing poker. But if you're asking whether it affected my education when I did my bachelor's degree in ... [withheld to ensure anonymity] then yes. Absolutely! Do I regret it? Not really. Because I knew, I was aware what was happening.

He played poker frequently and had problems with his bachelor's thesis, so he decided to take a break from his bachelor's studies and moved to another European city after reading about the city in a poker forum online. He did not know anyone there and his parents were less than pleased with his decision. But he stuck to his plan and got back home after six months and finished his degree, before returning to playing poker full time. He claimed his bachelor's thesis was so poor that it was embarrassing, but at least he did not fail. He had had poker as his only income since then.

As we can see from the three poker professionals who either dropped out or took a break from their studies, this was a decision they did not regret afterwards. The only professional who regretted his choice was Paul, and he was the only one who decided to stay in school.

The professionals' thoughts about combining poker and their studies seem somewhat reversed from what society regards as the more responsible choice. From society's point of view, they should put education first and then play poker in their spare time, just like Paul's parents demanded of him. Paul followed their advice and stayed in school but now regretted this because he believed he accordingly missed out on a substantial amount of money.

Peter claimed that he knew all along that the poker times were almost too good to be true and that it could not last. He therefore played as often as possible and then returned to school when "the golden days of poker" were gone. When Pierre was about to choose a topic to study at the university, he wanted something that could

help his poker abilities. In all of these stories poker came first when choosing between poker and education.

Adam (30) started on his bachelor's degree in 2007 and spent 8 to 10 hours per day playing poker instead of studying. He tried again a few years later with the same result. He described himself as a little bit better than a breakeven player. He claimed that the hard part about quitting poker was to find something else to replace it with. He also made the point that dropping out of school to play poker was not something he planned, it just happened. He claimed further that he has never been late or absent from work because of poker because "then you are responsible for others than yourself." He was now working full time, and plays substantially less poker than he once did, but nevertheless still spent a considerable amount of time playing the game.

Alex was nine years younger than Paul and was now facing the same dilemma that the poker professionals did several years ago. Alex (21) spent 25 hours per week playing poker and he knew that this was affecting his studies.

Alex: I think I need to make up my mind whether I should play even more to become really good, or whether I should play less and do it as a hobby and perform well at school instead. Because it affects my performance at school. It has to, in a way, if you want to be good at it. I need to take a deep look at myself and figure out what I want.

Author: Is it a close call?

Alex: Not really. I would never quit studying to play poker. But I want to play a lot of poker, and it is an important part of my life. I think it's fun, it's useful, and it's actually practical mathematics.

Alex, as opposed to the poker professionals, held the opposite position: education came first. Nevertheless, he was not willing to give up completely on poker although he knew it affected his academic performance.

When asked in what way poker affected their academic performance, the informants highlighted time as the most problematic factor. Among the other factors mentioned was the issue of circadian rhythms, since online poker typically took place in the evening and nighttime (European time), thus making makes it difficult to anticipate how long a poker tournament<sup>3</sup> will last. A tournament can last for several hours and you never know whether you will be knocked out within the first minutes of the tournament or if you will stay in it for the whole run.

Alex: [...] you're not getting much use from a lecture at 08:15 if you've been playing until 06:15.

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<sup>3</sup>Poker comes in two formats; cash games and tournaments. In a cash game each player may collect his chips (money) and leave the table at any time he pleases. In tournaments however, the game continues until one player has all the chips, making it hard to estimate how long the game is going to last.

When Alex talked about a poker tournament that lasted until 06:15 am, it meant that he had been knocked out of a tournament substantially later than he had expected to be. This again meant that he had had a highly successful poker night. As we can see, success for Alex at the poker table then had a negative impact on his education the next day. Peter described that early in his poker career, when he had periods with a good poker result, he did not bother to go to school. This is the same idea in a prolonged period of time. Later Peter indicated that he had to “milk the cow,” which meant that he had put his education on hold for some years so he could earn as much as possible for as long as his poker success continued. This was, however, not a shift Alex was considering at the moment:

Alex: Studying doesn't get easier and I can't really imagine playing poker full time at any point. So I may need to reduce my playing in order to get acceptable grades. My study program is actually quite heavy. So the question is whether I'm willing to play less, and if I actually go through with it if I'm tempted to play more. I don't know how easy it would have been to just quit. I do think about poker every day, a little. So I've been asking myself whether I'm addicted and I guess that I am. But then I thought, that by my own definition, you would not be addicted if you didn't lose money. But I think that if I didn't make money from it, if I was just losing, then I wouldn't think it was fun and I would have quit. But my plan is not to become a worse player.

Here Alex reflected on whether it was possible to have a gambling problem and win money in poker simultaneously. Alex ended the statement with the belief that he would not enjoy poker if he were not winning. This happened to Peter and Oscar (> 40) and neither of them reported any problems with quitting poker when they stopped earning money. Patrick changed from online to offline when the income decreased, indicating that the players are able to adjust if the profit stops.

Austin (23) claimed he had completed the education he had planned to take, so for him poker did not have much effect, but of course he would have received considerably more sleep if it were not for poker.

Andrew (23) quit his studies for his bachelor's degree and spent a considerable amount of time playing poker. He was unsure whether he quit because he did not like the subject he was studying or because poker was so time-consuming. He had moved to another city because of education and continued to stay there, making most of his money from underground poker clubs. He had now started his studies again and was quite sure he would not drop out this time. One of the reasons he claimed, was that he was not a good enough player:

Andrew: No, right now I'm not good enough. And it's not just that. I also want to do other things. There are more things in life that interest me. And it takes a lot to become really good. It's very hard to be a student when you're playing poker full time, and I guess many people are not managing that very well. You hear about the dropouts, and you've been dedicating a lot of time to it. And not

had time enough for school. I don't want that; I want to get an education and get work experiences.

Aaron (28) reported that poker especially affected his studies one semester when he was a bit stuck trying to complete his master's thesis. This had led to a half-year delay in his studies, but Aaron thought the delay could have another cause were it not for poker.

Andy had not yet started on a bachelor's degree. When asked if he would like to become a poker professional, he replied that it was not a particularly realistic scenario even though was tempting.

Andy: Yes of course it is. To not have to get an education and all of that, and just do what you love. If you can make a living from your hobby, then that's awesome. You're always thinking about it, but it's not something I think can happen unless I do great in a tournament.

Author: Is it a big amount that would make it happen?

Andy: Yes, and it's usually like that with everyone. All professional players have usually had that one tournament that gave them the opportunity. So you just have to wait for that.

Author: Do you talk about that? Making a living from poker? Do people in your circle of friends?

Andy: Yes, I think so. But don't believe they think it's realistic. When you're small and playing soccer and want to play for United when you get older. But not many actually do that.

Here Andy described being a poker professional as a dream many young players maintain, even though they do not think it will in fact happen, and compared it to being a professional sports athlete. Earning an education was somehow second-best and the more realistic alternative. None of the amateur players in this study considered it realistic to become poker professionals. Austin thought he might have a chance playing live poker in another country but that he had no chance online. Adam and Aaron believed that they could have had a chance online in "the golden days of poker," but not anymore. And as we have seen, Andrew claimed that he was not good enough and that he wanted to do other things than playing poker full time.

Among the players that have started on a bachelor's degree, all of them answered that they spent considerably more time on poker during their bachelor's studies than they did during high school. Only Pierre believed that poker, though it had indeed affected significantly his studies in high school, nonetheless had affected his bachelor's degree in this regard even more. Several reasons exist for this phenomenon. Many of the informants had moved away from home between high school and studying for a bachelor's and therefore now had substantially more freedom in deciding how to spend their time. A bachelor's curriculum is more loosely organized than is a high

school one, with fewer mandatory assignments. There is an 18-year age limit to play poker with money online so most of the informants did not play with frequency during high school.

There seems to be a broad agreement among the informants that, to become a successful poker player, the player must obtain significant volume. This requires the contribution of a considerable amount of time and, if online, playing several tables at the same time (multi-tabling).

If the other players train and develop their skills by playing more, the player in question risks falling behind. To become a professional player, investment of a substantial amount of time is essential. This is a fact players use both as an argument for playing frequently and as an argument for not pursuing a career in poker. Oliver (> 35) talked about a recognition he made early (2011) in his career when talking to a friend who was a professional poker player:

Oliver: If he didn't play poker during the weekend, he would spend a week to achieve the same win rate that he had before the weekend. That's how quickly the game evolved. And it was then I realized that I would never have the time for that. I will never be able to spend the time and energy needed to become a pro.

Patrick describes how poker became more challenging, especially online, and what kind of commitment that challenge consequently made necessary. He illustrated this fact with an anecdote about an encounter he once had with another professional poker player at the beach:

Patrick: He said he played poker four to five hours online every day, and studied poker for one to two hours. It was like a full work day every day. And this was at the beach; it was around half past three when he went home to play. To read and play. On a beautiful summer evening at Huk in Oslo. And then I thought that if this is what it takes then I will never get there. Because I've never had that level of dedication during my poker career. Yes, I've played a lot, and talked a lot, but I've never been very structured, maybe because the people I played against were bad enough that I didn't need to. I should have done it but didn't need to.

Pierre described how it was hard to spend time with his girlfriend when the games were good.

Pierre: During the week we could agree to go to a movie on Friday, but when Friday arrived I was playing six tables and making \$2000 an hour and I felt that I just had to cancel.

He felt that it was irresponsible to give up on the opportunity when he made that kind of money. Of course Pierre did not make \$2000 per hour most of the time he played. In fact the poker income was highly unstable, which made it even more necessary to prioritize poker before everything else when such conditions occurred.

Such a situation contributes to making it difficult to combine poker with education or one's life outside.

### **Pull and Push Factors Balancing Poker and Education**

To capture the dilemma described by the informants' choosing between playing more and becoming a poker professional or playing less and focusing on education, we use the figure of a weight scale. There are push and pull factors on both sides of the scale, because studying harder and playing more can both be tempting. The scale is also affected by both stable and unstable effects.

A stable effect is something that is more or less always there and the unstable is something that is changing rapidly. Parents' opposition to poker is viewed as a rather stable effect, unlike emotional well-being, which can be unstable. Income from poker was described as highly unstable on a weekly basis but stable on an annual basis. Push factors represent the feeling of almost being forced, and the pull factors represent a desire.

Broad agreement existed among the informants that poker can be emotionally exhausting. Since coincidence plays a huge part in the short-term result (in other words, the game has a high variance), all of the informants had experienced periods when everything was perfect (good runs) and dreadful periods when nothing worked (bad runs). Luck (variance) is a force that evens out over a long period of time, but can be difficult to handle over a short one. Periods when the informants were "running good" could lead to the informants becoming more eager, with a strong flow of dopamine, and greater personal excitement. "Bad runs" were described by a feeling of nausea, anger, regret, sorrow, and problems with making the right decisions. If they had been "running bad" for a long time it typically instigated a bad mood, uncertainty about their own capability, more resistance from family and friends, problems with defending their investment in poker, and a feeling of being sick and tired of the game. When the opposite was the case, it led to a feeling of high confidence, more acknowledgment from the other players, and a feeling of invincibility. It was common to take breaks in periods when they were unsuccessful but not in periods when they were winning more than normal. In short, more success leads to more play and less success to considering taking a break or quitting.

### **Has online poker changed?**

The professionals and the "old-timers" all described poker as considerably more challenging now than it was five years ago (2011–2016). One of the reasons for this was "Black Friday" April 15, 2011, when online poker was shut down in the United States, and certain poker sites were closed permanently. This event led to a large decrease in online player liquidity, in part because of the high proportion of US players across online poker sites, and in part because of a global decline player trust for poker sites.

Peter claimed it almost seemed as if he had lost his job.

Peter: [...] most of those you won a lot of money from were not there anymore. So my job kind of disappeared. And also Everest [poker site] moved to another network with plenty of good players and I felt like I couldn't find the old players. It was like my workplace closed down. That feeling. So I thought that I had to do something else.

He did not describe giving up poker as challenging, but it proved hard for him to sit down and read a book after being used to playing 6 to 12 poker tables simultaneously and becoming accustomed to a considerable amount of stimuli. He still had not completely stopped playing poker, but he had stopped making money. He took with him a huge profit from his poker days and had invested this in stocks, a car, and an apartment.

Pierre claimed that he used to spend 70 hours a week playing poker a few years ago, but finding good games had become more difficult, therefore he now spent only around 40 hours a week playing. This shift started after Black Friday, and he believed that poker had slowly become more challenging. Before 2011, there were many players, even at the highest stakes, that had little poker experience, and therefore became an easy target for the poker professionals, according to Pierre. Now at best they met excellent players who were used to another form of poker (tournament players playing cash game or Texas Hold'em players playing Omaha). Since the games on the highest stakes had disappeared, Pierre had been forced down to lower stakes and as a consequence he made less money. Changes in rake, rake back, and bonuses from the poker sites had also decreased the player's profit. All of the poker professionals claimed that they had made less money the last two years than before 2011. None of the amateur players are even close to making as much money as the professionals did when they started playing. According to Paul, it would be extremely unwise to leave school or college today to become a professional poker player.

Paul: I wouldn't quit my studies in 2015 to play poker if I didn't have an exceptional gift for it.

Author: How were things 5 to 10 years ago?

Paul: I would say it was madness to even study at all. That's my greatest mistake. I saw many of my friends become dollar millionaires with little effort and they asked me why [I was studying]. But I felt that it was something I should do in life because I was raised that way. So it was a coincidence that I ended up playing semi-professionally and making \$3–4,000 a month as a side job.

Oscar was one of the "old-timers," and when asked about the difference between making a living from poker in 2007 and 2016, he responded:

Oscar: If you took the best quarter of the players they might have been able to learn how to make a living from it.

Author: And how many is that today?

Oscar: A fraction. The market is so saturated that those who work really hard might earn \$10 an hour or something like that. And you might be happy about that if you're from Asia, China, or Russia. They are many and they push it down to that level. They're good enough to win a little. And there are few enough bad players so that's where the equilibrium is.

Oscar was a poker professional from 2003 to 2013 and claimed professional playing was no longer worth the personal investment.

Paul had moved to Asia because of poker and tax issues. He was not optimistic about the possibility of making a living from poker in the future. When asked if he knows many other poker professionals, he answered:

Paul: When I live down here there's a good amount. In Norway it's fewer and fewer. I think the trend will continue, unfortunately. I think that poker as a career will be dead in Norway in two years. I can explain why, if you want me to?

Author: Yes, please do.

Paul: The poker economy is declining. The pros are moving down in stakes. And to live a good life in Norway, and for poker to still be worth playing, you have to earn a good amount of money. It is quite hard to get there. And poker is changing, and these other countries have more incentives than we do. They're just as good, so we are falling behind.

According to Paul, in other countries many people were happy to make \$10 per hour.

Otto (> 40): Online is not the same as ten years ago. Ten years ago making money was easy online if you had basic knowledge and basic patience.

As an explanation, Otto emphasized poker software, which offered statistics on how the players were playing, and the fact that the poker population in general had become more experienced. It all contributed to making the games more evenly matched and the variance larger. When the games were more even, they would consequently last longer and the casino would make more (from rake), leaving correspondingly less money for the players. With the decrease in new players fewer weak opponents were now playing, thereby making a game more difficult for all of the players. The new players who did enter the site would now have a greater chance of running into more experienced players and therefore have a greater chance of losing their money faster. Since losing players often quit playing, the poker economy always needs to recruit new players. Patrick had a somewhat long but excellent explanation on why poker had become gradually more challenging after the poker boom (2003).

Patrick: The thing is that during the poker boom there were a lot of new players who had seen poker on TV. Most of the player base consisted of new people

who wanted to try poker. Not a lot of them knew what they were doing, but there were some who understood that if this is happening, that these players are joining and they don't know what they're doing, then it's possible to earn a lot of money. ... So, some people sat down, thought about strategies to beat them. And big Internet forums were created where we could discuss. And then the skill level increased, and then they thought we can make money not just from playing but from making videos that people pay to watch. And people watch those videos too and raise their skills further and realize what works and what doesn't. People are getting better and there aren't as many new players, and the player base is more homogenous. There's a big industry with coaching sites, authors that make a living from poker books, poker on TV, and it makes players become even better. So the player base is all moving up in skill, and then in the US, they ban poker so the supply of new players is cut off. And those at the bottom of the player base are now suddenly so bad that they have to stop playing because they're just losing money. So it's all compressed in a way. You're left with quite decent players who can survive online without the same supply of new players compared to what you had before.

The three remaining poker professionals interviewed were considering retiring within the next few years. All of them described their poker income as significantly decreasing during the last few years. This was especially true for Patrick, who reported that his income the last year had been like a "badly paid part-time job." Difficulties with combining family life with an unstable poker income are also mentioned by several informants. None of them wanted to end up as an old professional poker player. Among the hobby players and the youngest players few have a dream of becoming a poker professional.

Austin made money by playing at illegal poker clubs on the weekends against drunken players, but he considered online poker as too challenging to make a profit.

Austin: [...] and I've felt that I'm stagnating online, and I lose that spirit, you know. I know what the level is like; I've played a lot online, and I have a lot of friends who play online. And I know that it's very hard. ... I have 25 to 30 friends who play online and none of them profit in the long run.

If we return to the poker versus education weight scale, the informant's description suggests that the weight balance between poker and education had changed considerably in the last decade. If gamblers do indeed believe that poker becomes more competitive and less profitable, this belief may tilt the scale from pursuing a career as professional player to staying in college or university.

## Discussion

This study is, to my knowledge, the first to invite poker players to elaborate on whether they have struggled with combining poker and education. This article aimed to discuss three questions:

### **What Makes Combining Poker with Education Difficult?**

The results from the interviews suggest that the main reason why poker can produce a negative effect on education is the large amount of time the players need to invest in the game. To be successful as a player, one must keep up with one's opponents, and do so through two ways: frequent playing, and the consequent development of playing skills. The importance of investing time to develop poker skills has previously been discussed by several other authors (Jouhki, 2011; McCormack & Griffiths, 2011; Recher & Griffiths, 2012). An elaboration on this idea is to understand poker as a relative skill where the relevant ability is the player's skill compared to his or her opponents. To become better is not enough if other players improve at an equal or higher speed. The higher the level a player is on, the more important it becomes for him or her to invest more time. In this way, poker success becomes a reinforcing process, as it leads to better concentration, more confidence, and higher skills, all of which in turn lead to greater success. In the poker hierarchy, taking a break from poker could be costly.

Choosing between poker and education could be understood as a weight scale where both short-term and long-term success in poker may produce a negative effect on education. Short-term success can lead to longer periods of playing and affect the circadian rhythm since it is hard to quit when the game provide excitement or satisfaction. Since it is also hard to quit a game while winning, long-term success may consequently lead to dropping out of education. Or as Bjerg (2010) puts it, poker players are chasing wins.

Poker seems to have a higher priority than education among the best players even though several of them have attempted to combine the two. All of the professionals are considering retiring within a few years because the income from poker has decreased. It may come as a surprise that former successful and highly competitive players find giving up poker an easy choice if the income decreases. To understand this we should look at the downsides of poker described both by the informants as well as earlier studies. The game has a very high variance as Palomäki et al. (2013) have pointed out (see also Palafox, 2016). Short-term and long-term losses can be emotionally devastating (Palomäki et al., 2013; 2014). As Boutin (as cited in Challet-Bouju et al., 2015) proposes, when the game becomes more evenly matched, chance becomes more important. This fact makes playing more psychological challenging and less financially rewarding. It seems like both the professionals and amateurs have an ambivalent relation to poker. Therefore, if the income disappears, it pushes the weight scale towards not prioritizing poker. For the older players, at least some of this shift might be because of the age factor. It is not uncommon to desire a family and more stability at the start of one's thirties; it is, however, interesting that the players in their early twenties were less keen on becoming poker professionals, indicating that the changes in poker itself were also a contributing factor to this decline.

Difficulties with predicting how long a poker tournament is going to last and poker's effect on an individual's circadian rhythms may cause a short-term effect on

education on days that players are more successful than normal. As an example, the largest weekly online poker tournament (Sunday Million on Pokerstars) starts at 19:30 GMT and lasts for approximately 10 hours. If a player is successful in this or similar tournaments, his (or her) sleep will be greatly affected. If he is not, then chances of him being tired of poker at least for a short period of time decreases and he gets the sleep he needs.

The informants argued that, unlike education, poker is changing. Taking a break from poker to finish your education would greatly affect the gambler's chances to become a successful poker player. To the gambler, taking a break from education instead therefore seems as a less risky path.

### **Has online poker become more challenging?**

The vast majority of the informants claim that making money from online poker has become considerably more difficult the last five years. According to the poker scale figure Figure 1, a decreased income will result in less poker playing. To my knowledge no previous study has discussed whether online poker has become more challenging. The topic is, however, often widely discussed in poker forums and poker news sites.

According to the informants, among the reasons why online poker has become more challenging are the growth in experience of the poker population, legal issues concerning American players, more software programs to help the players, and new players settling for less profit. There is also a huge industry creating and promoting poker videos and books, one that makes the new (and old) players more aware of strategies. Players with poor strategies today will more quickly lose their money than they would have during the "poker boom" (2003–2006) because the players they compete against have more developed skills. This leads to fewer new players coming in to the poker sites and that again makes the games more evenly matched. The importance of playing against inferior players for the professional players is earlier discussed by McCormack & Griffiths (2011) as well as Vines & Linders (2016).

If the players are evenly skilled, their games will become longer and more money will become rake at the casino. The former successful players will have a reduced income and former breakeven players will therefore be losing players and might retire. The player population therefore consists of a more homogeneous group making it harder to become successful.

### **Do changes in online poker affect a student's inclination to drop out of education?**

In this study several findings suggest a decrease in students quitting school to play poker. Among the amateur players few had the ambition to become professional players. The youngest player claimed that the situation somewhat matches becoming a professional soccer player: it is an achievement many persons dream about but not an achievement they believe will ever happen.

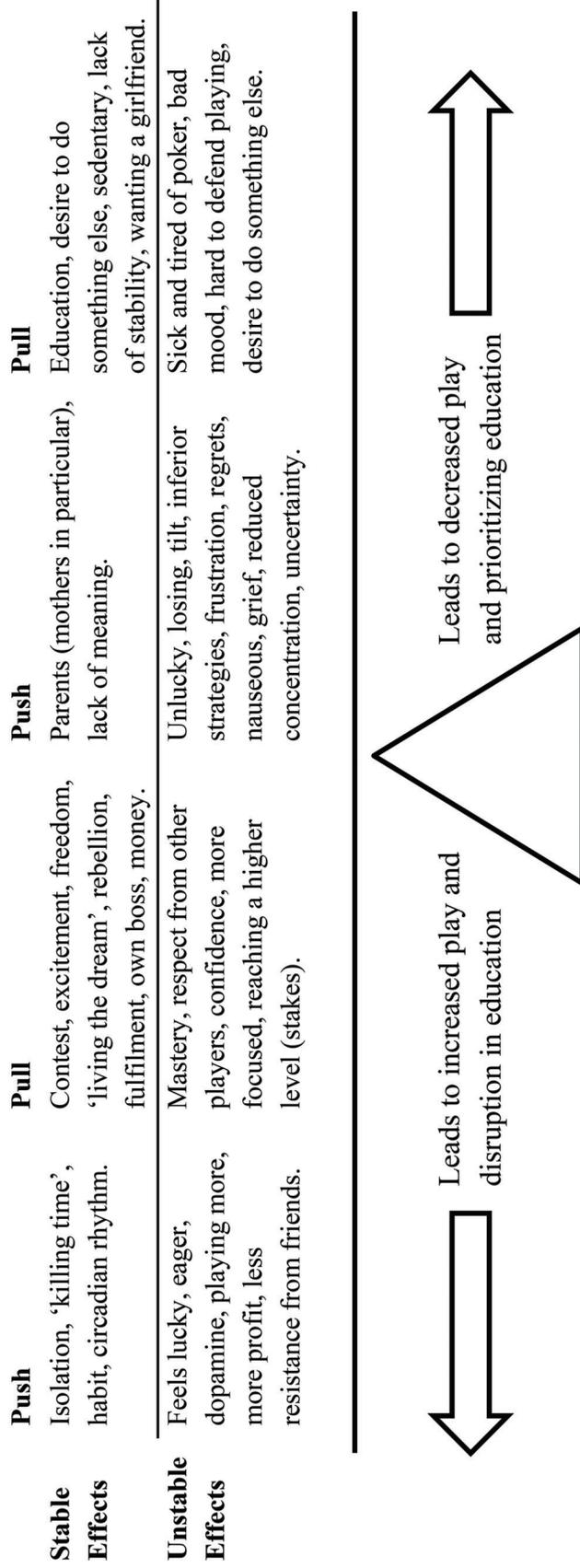


Figure 1. The poker versus education weight balance.

The professional players all dropped out of school after a significant poker income. None of the amateur players had a poker income that was anywhere close to the professionals' income when the professionals were the same age. Both amateurs and professional players reported that it is exceptionally challenging to make money online now compared to "the golden days of poker."

It is, however, possible that an increase in former semi-professional players no longer able to make a profit from online poker, and therefore in need of a different occupation or education, will take place. Such a rise may also increase the number of poker players in need of treatment, since breaking even or making a small profit is harder than it was prior to 2011. We might see a decreasing number of poker players at the same time as a higher share of the poker population is in need of treatment.

When approaching a young player who is considering becoming a poker professional, informing them of how the online poker has developed towards a less profitable direction and the experienced players feeling a lack of meaning and experiencing a struggle that is far from glamorous might be fruitful.

## **Conclusions**

This study includes several limitations. The informants interviewed are generally successful professional players or successful amateur players. Only one of the informants admitted an overall loss of money playing poker. The informants were not representative for poker players in general. Different countries maintain different tax rules and poker laws, thus the potential to become a professional poker player may differ depending on country. The players commanded generally long experience and had worked hard to develop their respective poker skills. With fewer strategic players as part of the study, the results would accordingly have been different. No attempts were made to control the accuracy of the informants' personal stories and no psychometrics testing or diagnostic gambling tests were conducted.

Since this is an exploratory interview study with a small number of informants the research design is not suitable for generalizations and casual explanations. It is however possible to make assumptions and generate hypotheses. The three main hypotheses generated from the informants' stories were as follows. (1) To succeed in poker the player requires an excessive amount of time, dedication and structure. As a consequence it is difficult to combine poker playing at the highest level with studies and leisure time. (2) The online poker base has gradually become more experienced, skilled and homogeneous after the poker boom, making the game more competitive. After "Black Friday" a decrease in new players entering the poker sites has taken place. This shift amplifies the challenges to gaining a profit. (3) Since online poker has become less profitable, we are likely to expect a decrease in the number of students dropping out to play the game, and an increase in former professional poker players who retire. More research is needed to determine if these findings could be reproduced or elaborated on by other studies. To understand better how a dedication

to playing poker affects students' lives, we need research on poker players' learning processes, as well as their and variety of learning methods. Understanding the poker players' perspectives may be highly valuable for prevention and treatment of gambling problems.

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