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# Hong Kong Internet Use and Online Gamer Survey 2011<sup>1</sup>

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Supported by Hong Kong Game Industry Association

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# 1 Research Background

Online game has been increasingly popular over the past ten years and the game industry is gaining its importance in global, regional and local economy. Nevertheless, in view of the rise of online game industry, there are different viewpoints on its rise. Consulting firm once pointed out that online game as leisure culture and creative industry is inevitable in the era of information technology<sup>2</sup>. Some stakeholders hold a skeptical view and they are concerned about the negative impacts brought by online gaming, such as Internet security and physical and psychological well-being of adolescent<sup>3</sup>. Industry representatives think that such concern is only the social stereotype of online game, resulted by several specific cases portrayed by the media.

Target of this research covers both gamers and non-gamers. This research seeks to explore the impacts of online game on gamers and their consumption pattern, serving as a reference in public policy to balance between industry development and prevention of negative impacts of online game. This report consists of 3 parts: the first part is about the use of Internet, online games and other games. The research findings provide the key stakeholders with reliable statistics to estimate the market potentials of online game industry and its future trend. The second part is about the impacts of online game on gamers. By comparing the public perception on online game and the actual experiences of gamers, we can verify whether public perception is biased. The third part is about gamers' consumption pattern, including their frequency, preference, choice of venue and game cards purchase.

This research is part of project “Hong Kong Game Industry: Cultural Policy, Creativity and Asian Market”, which is commissioned by Research Grants Council (RGC). The survey is organized by the School of Journalism and Communication, The Chinese University of Hong Kong and the data is collected by the Center for Communication Research (CUCCR). CUCCR was founded in 2004, as part of the School of Journalism and Communication. Since the School of Journalism and Communication was established in 1965, the creative industry has long been the focus of teaching and research. Undergraduate students can not only specialize in news, advertising and public relations, but also choose creative and new media as electives. Meanwhile, the school also offers master course in new media, providing professional training in new media and creative industry.

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<sup>2</sup> *The Connected Harbour How the Internet Is Transforming Hong Kong's Economy* by BCG (May, 2011)  
[http://static.googleusercontent.com/external\\_content/untrusted\\_dlcp/www.connectedharbour.hk/en/hk/files/the-connected-harbour-may-2011.pdf](http://static.googleusercontent.com/external_content/untrusted_dlcp/www.connectedharbour.hk/en/hk/files/the-connected-harbour-may-2011.pdf)

<sup>3</sup> Media coverage with negative sentiments include *190 thousands of Hong Kong teenager may be addicted to internet with 17.64 hours online per week* (Hong Kong Commercial Daily, 2011-05-28), *Notice: internet wolf is around* (Wen Wei Po, 2011-01-10), *Game addict died in cyber cafe with 6-hour online game* (Singtao Daily, 2003-01-12) and *Young gamer committed suicide because of stolen virtual weapon* (Oriental Daily, 2002-10-17).



## 2 Research Method

Data of the Hong Kong Internet Use and Online Gamer Survey is mainly from tele-interview. In May 2011, our researchers collaborate with the Center for Communication Research and draw 800 samples by random sampling, investigating the use of Internet and the online game culture in Hong Kong.

The process of data collection lasted for 5 days. 112 interviewers conducted tele-interview on 14<sup>th</sup>, 15<sup>th</sup>, 18<sup>th</sup>, 19<sup>th</sup> and 20<sup>th</sup> April 2011. To ensure the alignment between the interview and the standard procedure, all interviewers were well trained with the interview skills. In addition, our researchers and the research center supervised the interview procedure. Target of this survey was Hong Kong residents aged between 14 and 45 with literacy in Chinese. There are 872 successful cases.

To avoid any bias caused by the deviation among the distribution of gender and age, the statistics collected in the survey had been weighted. Further analysis on the five variables, namely gender, age<sup>4</sup>, education, monthly income and occupation<sup>5</sup> were introduced, and that aimed to provide more in-depth analysis on online gamers' consumption pattern.

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<sup>4</sup> Target of this tele-interview was aged between 15 and 45. Target group is mainly divided into two age groups: the one aged between 15 and 24 and the other one aged between 25 and 45. Such categorization is based on the official definition of adolescent and adult from the Hong Kong government.

<sup>5</sup> For convenience, occupation is simplified as professional, white-collar worker, blue-collar worker, students and unemployed. Professional refers to managers, administrators and professionals. White-collar worker refers to clerks and workers in service sector. Blue-collar worker refers to workers whose job relies most on physical manpower. Student refers to those who are enrolled to education institution. Unemployed refers to retired, jobless and underemployed.



## 3 Use of Internet, Online Games and Other Games

### 3.1 Popularity and Average Time on Internet and Online Games

**Table 1 Popularity and Average Time on Internet and Online Games**

Variable	Category	Average Time Spent on Internet	% of Respondents with Online Gaming Experiences	% of Respondents with Web Game Experiences	% of Time Spent on Online Game Out of Time on Gaming	% of Time Spent on Online Game Out of Time on Internet
Gender	Male	194.74	20.7%	44%	48.69%	39.34%
	Female	148.37	8.8%	42.5%	40.35%	28.03%
Age	15-24	178.37	21.3%	55.3%	50.90%	40.39%
	25-45	165.39	11.4%	38.6%	42.33%	31.95%
Occupation	Professional	213.65	9.3%	38.5%	40.97%	27.33%
	White collar worker	143.80	11.3%	48.1%	43.81%	37.35%
	Blue collar worker	124.77	18.7%	36.9%	50.59%	48.06%
	Student	183.08	25.5%	53.9%	49.60%	40.10%
	Unemployed	92.80	9.7%	34.1%	49.96%	22.66%
Family Monthly Income	HKD 14999 or below	133.02	22.4%	35.3%	52.79%	37.75%
	HKD 15000 to HKD 29999	162.38	17.1%	55.3%	50.67%	38.12%
	HKD 30000 or above	198.40	9.8%	39.2%	39.62%	30.26%
Education Level	Form 3 or below	104.72	14.6%	33.6%	37.63%	43.60%
	Form 4 to Advanced Level	129.96	16.9%	52.1%	44.43%	40.32%
	Tertiary Education or Above	219.86	11.4%	38.1%	48.38%	26.44%
<b>Total</b>	Average	<b>168.91</b>	<b>14.1%</b>	<b>43.1%</b>	<b>45.85%</b>	<b>35.41%</b>

According to our respondents, the average time Hong Kong residents spend on Internet is 168.91 minutes. For gamers, online gaming occupies 45.85% of their time on gaming and accounts for 35.41% of their time on Internet. The statistics suggest that online game has become the major trend in gaming and online activity. By comparing gender, age, occupation, family monthly income and education, there are several observations. First, men spend more time on Internet than women. Second, younger spend longer time on Internet than older. Third, there is a positive association between family monthly income and time spent on Internet. Fourth, higher education level is positively linked to longer average time

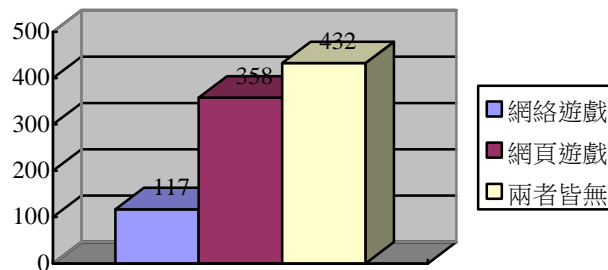


spent on Internet. The range within occupation and education level is the largest, exemplified by 100-minute difference between the highest group “professional” and the lowest group “unemployed” .

### 3.2. Popularity of Online Game<sup>6</sup> and Web Game<sup>7</sup>

According to statistics, more than half respondents have participated in online and web games and roughly half respondents did not have any experiences in any of them. Given nearly 10% difference, web game appears more popular than online game. The target audiences of online game are mainly male, aged between 15 and 24, student or blue collar worker with less than HKD 14999 family monthly incomes. As for web game, its target group is mainly young and students but the number of gamers who are white-collar worker with family monthly income ranged from HKD 15000 to 29999 is still significant.

圖1 網絡遊戲與網頁遊戲的普及程度



\* As respondents are allowed to choose more than one option, the total percentage exceeds 100%.

### 3.3. Popularity of Other Games

Apart from online game and web game, 348 respondents reported that they had participated in mobile game and the number remained highest compared with other games. Number of gamer of NDS, Wii, PSP and PS3 was close to each other but they were higher than XBOS and others<sup>8</sup>. To compare the gamers among NDS, Wii, PSP and PS3, they appeal to groups with different demographic characters. XBOX targets professional with higher education level and family monthly income. While PS3 gamers are aged between 25 and 45, PSP gamers are mainly blue-collar workers and students. Female occupies the majority of NDS gamers. Mobile game appears equally popular in different group although number of blue-collar workers with lower education level and family monthly income is relatively lower than other groups. In other words, mobile game is an emerging trend.

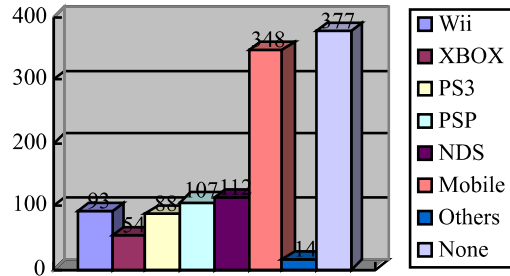
<sup>6</sup> Online game refers to game that requires the gamers to install a particular programme before they participate in the game.

<sup>7</sup> Web game refers to game that does not require the gamers to install a particular programme for their participation. The game could work in Internet browser.

<sup>8</sup> Respondents who chose others played ipod touch, ipad and PS2 games.



Figure 2 Popularity of Other Games



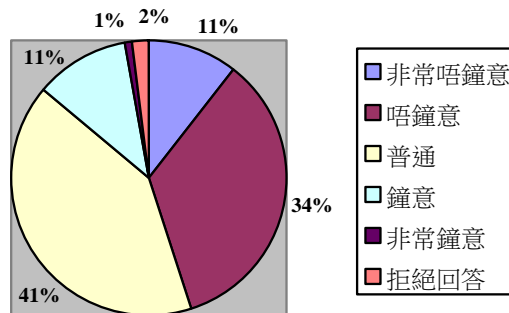
\* As respondents are allowed to choose more than one option, the total percentage exceeds 100%.

## 4 General Perception of Online Game

### 4.1 General Perception

Overall speaking, the general public holds a negative viewpoint on online game, exemplified by 45% respondents choosing “very dislike” or “dislike”, 41% respondents choosing “average” and only 12% respondents choosing “like” or “very like”.

圖3 對網絡遊戲的喜惡程度



General perception on online game can be analyzed at five dimensions. Level of addiction serves as the foundation of the other four dimensions, which include time management, human relationship, physical and psychological well-being as well as academic and work performance.

### 4.2 Impact on Time Management

Figure 4 and 5 reflect whether public perceives any impacts of online games on time management and time with family. More than 80% respondents agreed that online gaming affected time management and more than 70% respondents thought that online gaming affected time with family.

圖4 是否同意「網絡遊戲會影響到時間

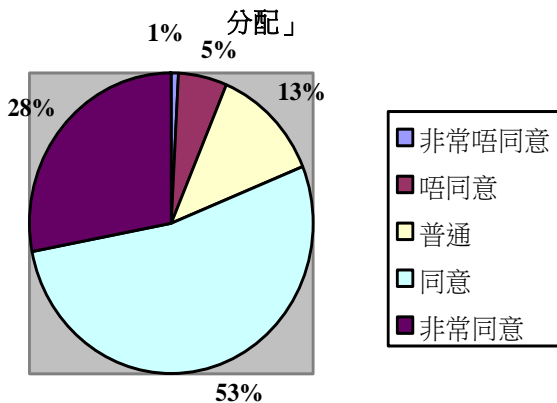
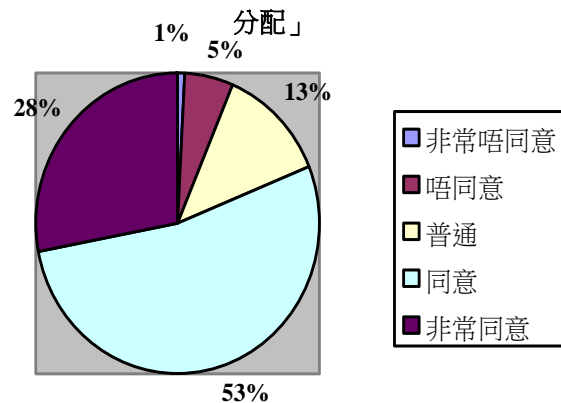


圖4 是否同意「網絡遊戲會影響到時間



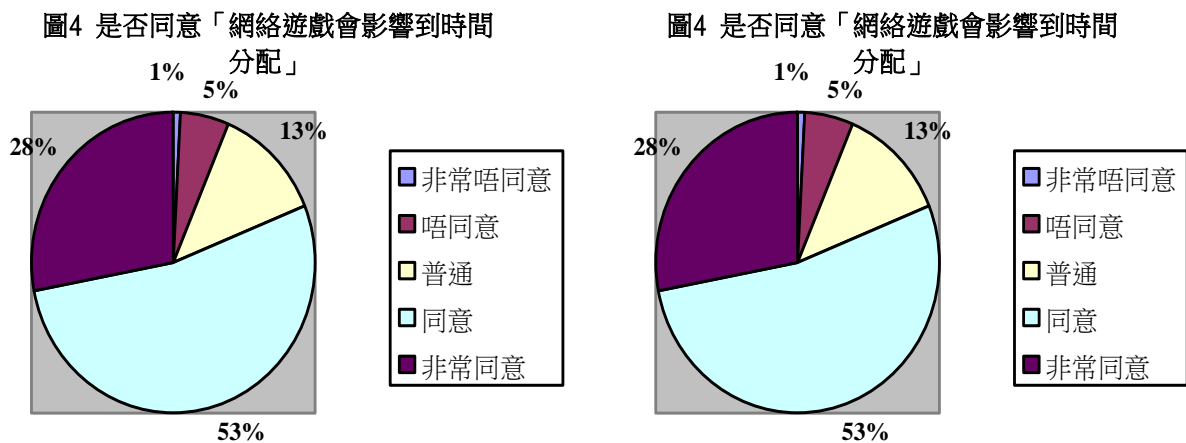




There are differences among several groups of respondents. First, more female than male agree on both statements, exemplified by 10% difference on “time management” and 14% difference on “time with family”. Second, less blue-collar workers agree on the impacts of online game on “time management” with 25% difference in average. There are fewer students and blue-collar workers agree on the influence of online game on “time with family” than other occupations. Last, there is a positive association between education level and frequency of agreeing the two impacts of online game.

#### 4.3 Impacts on Human Relationship

Compared with the impacts of online game on time management, public tends to think more positively about the impacts on human relationship. Less than half respondents agreed on the association between online gaming and family bonding. When being asked about the harms on relationship with others, approximately 70% gamers disagreed on the statement.



Regarding perception on online game, more female aged between 25 and 45 and male aged between 15 and 24 tend to agreed on the impacts of online game on family bonding than other groups. Although fewer students agreed on the impacts on family bonding, more students agreed on the harms of online game on their relationship with significant others.

#### 4.4 Impacts on Physical and Psychological Well-being

As figure 8 suggests, nearly 80% respondents agreed on the impacts of online game on health. Among those who chose “strong agree” and “agree”, female and the age group between 25 and 45 remain the majority. Blue-collar worker, students and the group with form 3 or below education level tended to choose “disagree” and “strongly disagree”.



圖4 是否同意「網絡遊戲會影響到時間分配」

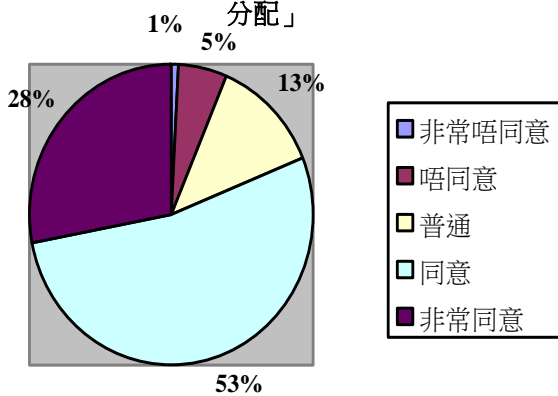
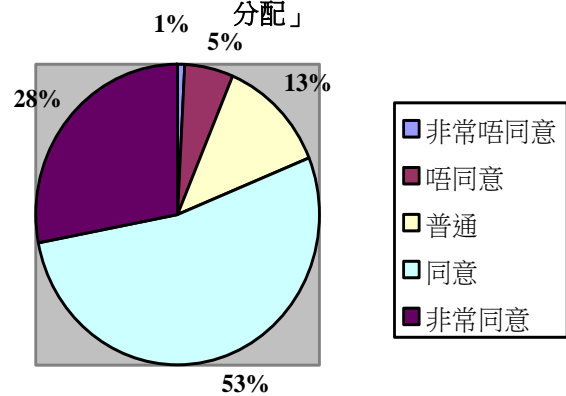


圖4 是否同意「網絡遊戲會影響到時間分配」



When being asked about whether to use online game to escape from trouble and negative emotions, only 20% gamers expressed agreement. Male, students, age group between 15 and 24 and respondents with form 4 to form 5/advanced level education level remain the majority.

#### 4.5 Impacts on Academic and Work Performance

Figure 10 and 11 contrast the public perception on online game and the gamers' actual experiences. More than 70% respondents thought that "online game would influence academic and work performance" but nearly 50% gamers expressed disagreement on the negative impacts of online game on their academic and work performance.

圖4 是否同意「網絡遊戲會影響到時間分配」

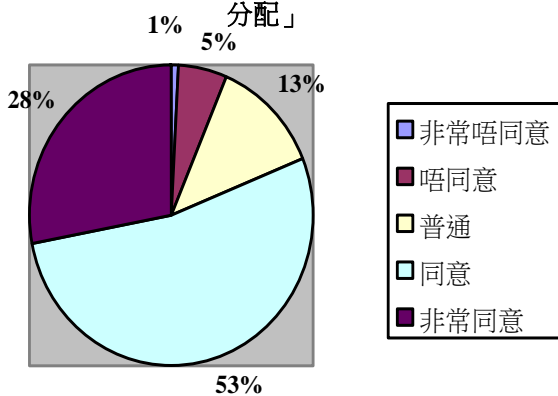
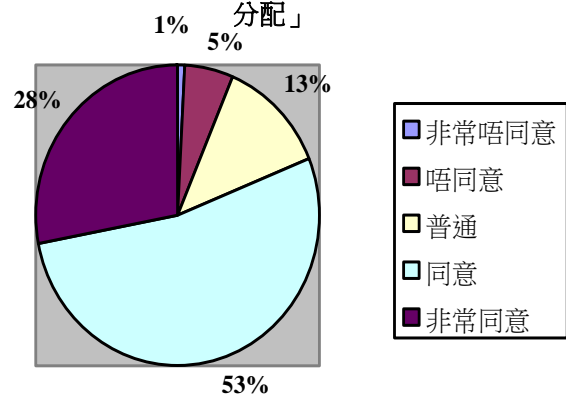


圖4 是否同意「網絡遊戲會影響到時間分配」



There are several differences among various groups. First, more respondents from the age group between 25 and 45 than from the age group between 15 and 24 agreed on the impacts of online game on academic and work performance. And yet more respondents from the age group between 15 and 24 than from the age group 25 and 45 reported their negative experiences. Second, although more female than male respondents thought that online game would influence academic and work performance, more male than female respondents reported such actual experiences.

#### 4.6 Addiction to Internet



Level of addiction is the foundation of the other four dimensions and it could be further analyzed in term of gamers' psychological state, attempt to reduce online gaming and intervention from other people.

Regarding psychological state, more than half gamers strongly disagreed or disagreed that long hours on online gaming make them in the state of ecstasy and only approximately 10% gamers strongly agreed or agreed on such effect of online game. Among respondents who chose "strongly agree" or "agree", male, students and respondents with education level of form 3 or below remain the majority.

圖4 是否同意「網絡遊戲會影響到時間分配」

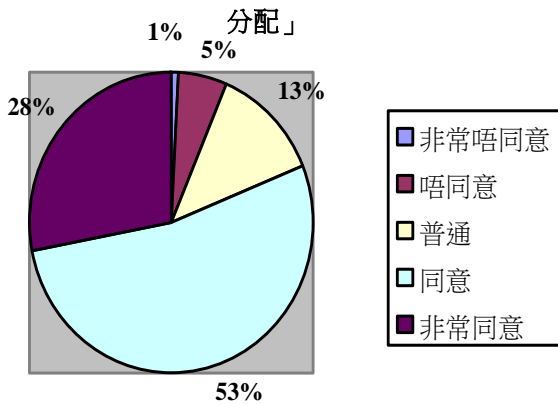
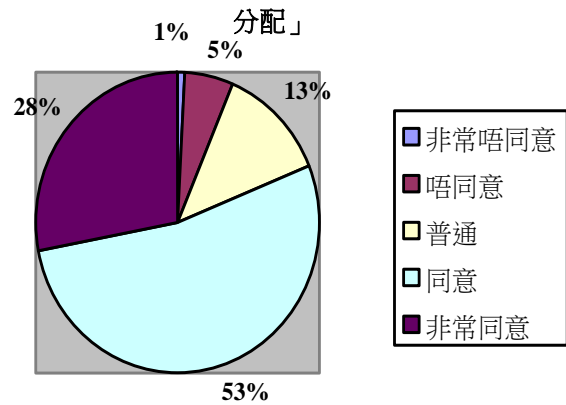


圖4 是否同意「網絡遊戲會影響到時間分配」



As figure 14 and 15 suggest, roughly 70% gamers strongly disagreed or disagreed on their experiences of failing to reduce or stop online gaming and the subsequent negative emotions such as depression and anger. Among a few who chose "strongly agree" and "agree", students remain the majority. Respondents with education level between form 4 and advanced level reported more experiences of failing to stop online gaming. Respondents with tertiary education reported more experiences of depression and anger because of their attempt to reduce or stop online gaming.

圖4 是否同意「網絡遊戲會影響到時間分配」

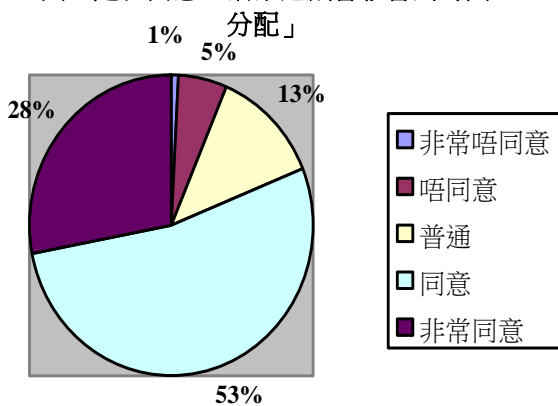
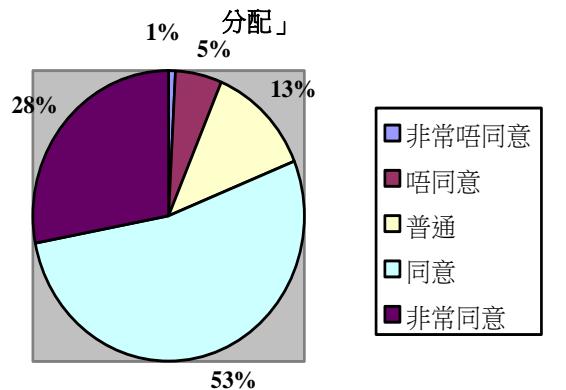


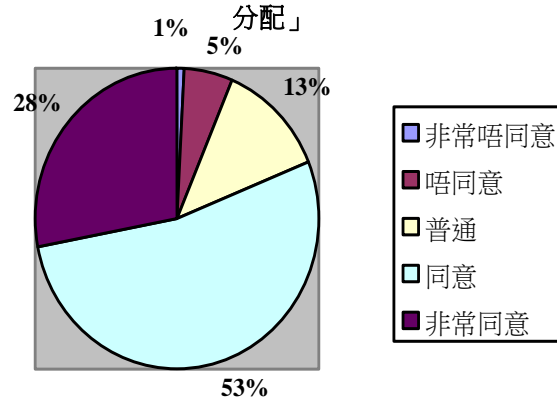
圖4 是否同意「網絡遊戲會影響到時間分配」



As for whether to hide their time on online gaming from friends or family, only 6% gamers expressed strong agreement or agreement and more than 70% gamers chose "strongly disagree" and "disagree".



圖4 是否同意「網絡遊戲會影響到時間





## 5 Consumption Pattern of Gamers

### 5.1 Frequency, Time and Consumption on Online Game

**Table 2 Frequency, Time and Consumption on Online Game**

Variable	Category	Frequency of online gaming per week (in term of day)	Time spent on online gaming per day (in term of minute)	Money spent on online gaming
Gender	Male	4.61	113.02	130.75
	Female	3.58	64.19	111.60
Age	15-24	4.46	111.15	149.47
	25-45	4.11	84.31	106.73
Occupation	Professional	4.36	102.57	85.92
	White collar worker	3.84	74.07	136.51
	Blue collar worker	5.05	86.23	254.85
	Student	4.33	113.29	113.40
	Unemployed	3.70	77.80	104.00
Family Monthly Income	HKD 14999 or below	4.67	108.72	96.33
	HKD 15000 to HKD 29999	4.79	90.74	184.01
	HKD 30000 or above	3.50	83.13	95.57
Education Level	Form 3 or below	5.06	104.80	155.59
	Form 4 to Advanced Level	4.31	89.70	140.79
	Tertiary Education or Above	3.86	101.29	93.67
<b>Total</b>	Average	<b>4.25</b>	<b>95.61</b>	<b>123.67</b>

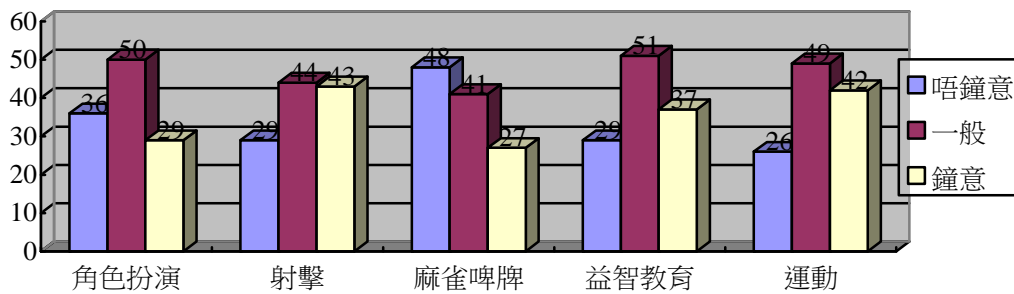
Overall speaking, online game as entertainment has become very popular. Frequency of online gaming is 4 days per week on average with as high as 90 minutes per day. Money spent on online gaming is approximately HKD 124 on average. To compare the differences among groups, male, aged between 15 and 24 and with education level of form or below have higher frequency, average time and spending on online game than other groups. Professionals and students have higher frequency and more time spent on online game than the other groups. Gamers with tertiary education or above spend almost the same amount of time on online gaming as the other groups with different education level.

### 5.2 Preference on Various Types of Game

According to the respondents, the most popular game genres in order are: shooting, sport, education, role-play and mahjong. More respondents preferred education and mahjong type online game from the age group between 25 and 45 as well as between 15 and 24 than other age groups. To compare the differences between two genders, although there were more men than women who

preferred role-play, shooting and sport type online game, the difference in term of number was slight. Nevertheless, far more women than men liked education and mahjong type online game. There were more professionals and students than other occupation groups liked shooting and sport type. Students preferred role-play most while professionals tended to enjoy education and mahjong more than other types of game.

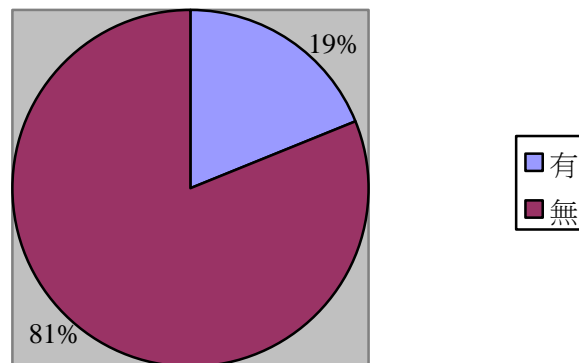
圖17 玩家對各種遊戲類型的喜好



### 5.3 Venues for Gamers' Entertainment and Consumption

Regarding the venue of online gaming, only 20% gamers visited cyber café and game center<sup>9</sup>. Among respondents who visited cyber café and game center, female, professionals and students were more common than other groups.

圖18 平時有無去網吧或者遊戲機中心玩



### 5.4 Consumption Pattern of Game Cards<sup>10</sup>

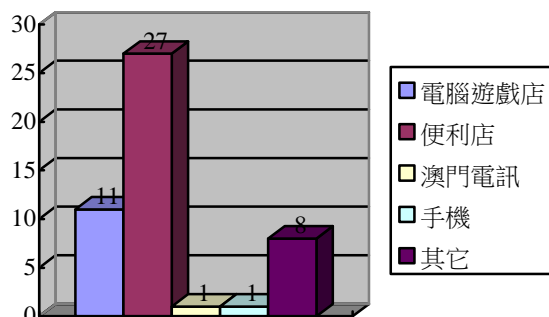
To compare different distribution channels of game cards, convenience store remained the most popular channel, followed by computer game store and others<sup>11</sup>. Mobile phone and Companhia de Telecomunicações de Macau (CTM) appeared the least popular.

<sup>9</sup> The statistics are not consistent with the estimation from the industry. The difference could be because of game center or cyber cafe as the research site.

<sup>10</sup> In view of the small amount of respondents, the statistics may not be representative and that could only be taken as a reference. Details please refer to *Report on the Hong Kong and Macau Online Game Industry 2010* by School of Journalism & Communication from The Chinese University of Hong Kong. The report is uploaded the website: <http://creativeindustries.com.cuhk.edu.hk/wp-content/uploads/2011/07/Hong-Kong-Game-Industry-Report-2010.pdf> .



圖19 買遊戲點數及點數卡的地方



<sup>11</sup> Respondents who chose others had purchased game card in game agent, bookstore, Mainland China and other game websites.



## 6 Conclusion

To revisit the two main objectives of this research, on the one hand, we hope to provide the government with the relevant statistics for policy making, which can facilitate the development of the online game industry and reduce of the negative impacts of online game. On the other hand, we hope to offer data about gamers' consumption behavior to industry key players, including producer, agent, entertainment venue provider and distributor.

### 6.1 Negative Perception on Online Game as Stereotype of Non-gamer

Research suggests that Internet is already very popular and it is estimated to increase together with the rise of information technology and education level. In the meantime, as the popularity of online game and web game reaches as high as half population, the government should not underestimate or neglect the potential impacts of online game. According to our respondents, the public perception on online game tends to be negative and the main concerns include its impacts on time management and academic and work performance. Nevertheless, comparing the public perception and gamers' actual experiences, nearly 50% gamers disagreed on the negative impacts of online game on academic and work performance. In addition, most gamers disagreed on their addiction to online game. In other words, the negative public perception on online game could be the consequence of the extreme case presented by the media. The government should provide assistance to those extreme cases, but also encourage public to enjoy online time as a form of entertainment in a reasonable way. Meanwhile, the industry is advised to further develop "education type" of game, which couples entertainment and education and is shown popular among professional audiences.

### 6.2 Diverse Gamer Profiles Reveals Enormous Market Potentials

Another stereotype on online game is that gamers tend to be male and students with low income and education level. Nevertheless, professionals with family monthly income between HKD 15000 and 29999 are also the critical mass of online game and web game. In certain types of game, education and Mahjong for example, there are more female gamers than male gamers. In other words, different type of game appeals to audience with different profile. As role-play remains the mainstream of the online game market but the total number of gamers who are into shooting, sport and education is higher than the number of gamers who are into role-play, the industry should take a proactive approach in developing other types of game. On the one hand, diversification of online game offers more choices to gamers. On





the other hand, it can attract more non-gamers. In addition, in view of the rise of smart phone and cross-platform function, mobile phone is another rapidly emerging game market. Last but not least, gamers in Hong Kong tend to rely on convenient store and computer game store to purchase game card, and that appears slightly backward compared with Mainland China and other countries. The lack of policy to support payment platform hinders the development of the industry.