

Citation for published version:

Barry Ip, and Xianhui Che, 'A Primer Survey of Chinese Mobile Games', *Asiascape*, Vol. 3 (1-2): 17-37, 2016.

DOI:

<https://doi.org/10.1163/22142312-12340046>

Document Version:

This is the Accepted Manuscript version.

The version in the University of Hertfordshire Research Archive may differ from the final published version.

Copyright and Reuse:

Published by Brill.

Content in the UH Research Archive is made available for personal research, educational, and non-commercial purposes only. Unless otherwise stated, all content is protected by copyright, and in the absence of an open license, permissions for further re-use should be sought from the publisher, the author, or other copyright holder.

Enquiries

If you believe this document infringes copyright, please contact the Research & Scholarly Communications Team at rsc@herts.ac.uk

A Primer Survey of Chinese Mobile Games

Barry Ip, University of Nottingham Ningbo Campus

Xianhui Che, University of Hertfordshire

Barry Ip

Division of International Communication,
University of Nottingham, Ningbo,
Zhejiang Province, 315100, China.
barry.ip@nottingham.edu.cn

Xianhui Che

School of Computer Science,
University of Hertfordshire,
College Lane, Hatfield, AL10 9AB, UK.
x.che@herts.ac.uk

Abstract

This article seeks to provide an introductory insight and evaluation of the nature and current composition of the Chinese mobile games market. Research was conducted to explore the subtle yet prevalent distinctions in game genre classifications in China, followed by an examination of game rankings as an indication of the sorts of titles that are popular in the region. Further insights are then offered on the leading distribution platforms where mobile games are hosted, representing a unique characteristic of the Chinese market. Finally, the paper offers a further evaluation of mobile games via a three-step model that considers attracting new players, gamer retention, and revenue generation. The outcomes of this work can serve as potentially valuable and practical insights into the characteristics and operation of Chinese mobile games.

Keywords

Mobile Games, Chinese Mobile Games, Games Market, Game Genres

1. Introduction

Recent statistics indicate that the Chinese mobile market (measured according to revenues for smartphones and tablets) is set for unprecedented growth and will eventually overtake the US in terms of revenue generated by 2016 (Global Mobile Game Confederation 2015). Consequently, the Chinese market for mobile interactive games is also predicted to become the largest market in the world (Global Mobile Game Confederation 2015).

There are three core motivations behind this article. The first is owing to a relative shortage of academic research in the area of mobile games (in general), but especially that focusing on the Chinese market, the latter possibly due to the difficulties in obtaining English-language sources on the Chinese market and comparatively recent strides by Western companies to focus on expanding their presence in the country. This article therefore seeks to fill this void by providing an up-to-date analysis of the current nature of the Chinese mobile games market. Second, even where statistics and reports on the Chinese games market are available, discrepancy can be observed among market research data, along with the presence of often subjective analysis: for instance, while the Avazu (2014) report contains pertinent data, it also gives statements on the preferences of Chinese gamers (such as ‘showing off behaviour’ and ‘crushes for luxury brands’) without formal evidence, and thus it can be difficult to be convinced by existing reports even if they can be found. Third, there can be frequent short-term fluctuations in the market share of mobile games due to varying market strategies: for example, as reported in (Global Mobile Game Confederation 2015), the number one Chinese mobile game publisher, Tencent, lost three titles in the top-10 list based on revenue generation ranking over a six-month period. Consequently, this paper will collect statistics based on total download counts so as to more accurately reflect long-term performance of mobile games and their respective publishers.

The outcomes of this work would appeal to a range of potential readers. The recent and expected further growth of smart phones and apps has also led to an emergence in study of mobile games. The Chinese mobile market is posed to be the world's number one region for mobile games, and thus the work in this paper is suitable for general researchers who have recently entered the field and who may wish to obtain a comprehensive overview of Chinese mobile games as means of stimulating further studies. Game designers may also find practical uses for the outcomes in this paper in terms of the potential impact of the intricacies and requirements of game design for audiences and applications in China.

Section 2 reveals the major Chinese mobile game genres and relevant rankings based on the collection of recent data. Section 3 explains the leading mobile game publishing platforms, which is a unique characteristic of game distribution in China. Section 4 discusses the key perspectives of studying and analysing Chinese mobile games based on a case study of a successful Chinese mobile title. Section 5 concludes this paper.

2. Game Genres and Ranking

2.1. Game Genres

A plethora of published material exists on the definition and evaluative aspects of game genres in established western markets, such as role-playing, racing, social, and board games. Mobile games, particularly in Chinese market, cannot necessarily be subjected to the same set of established categorisations of game types due to the wide differences in technological development, cultural and political environments, society, and player preferences and expectations. Despite such differences, western interpretations of Chinese mobile games tend to make use of the same genre categories as those for the western market. Statistics from sources such as LocalizeDirect (2014) and Apsalar (2013) define genres for both English and Chinese games as follows: puzzle, family, action, educational, arcade, strategy, adventure, board, trivia, and card. In practice, however, it will be more relevant and accurate to study mobile game genres based on Chinese definitions, as these will more precisely reflect Chinese culture and conventions.

There are various media channels and platforms in China that publish, rank, and assess mobile games, the details of which will be explained in Section 3. All platforms consistently categorise mobile game genres into the same eight major genres as shown in Table 1, including Sports & Racing, Chess & Card, Leisure & Quiz, Fly & Shooting, Management & Strategy, Network Games, Action & Adventure, and Role Playing. Western and Chinese classifications differ: for example, Chess & Card would belong to a sub-division in western categories, but it stands as an independent genre in the Chinese classification system, likely because Chinese chess and Chinese poker are traditional games that are firmly integral to Chinese culture. The history of Chinese chess can be traced back to more than three thousand years (Chinese Consultancy Network 2013), while 91% of Chinese families possess poker

cards at home for regular play (Sina Finance 2015). Mobile devices serve as convenient platforms for this cultural continuation for these two types of game.

Table 1. Mobile Game Genre Classifications




Western definition	Chinese definition
<ul style="list-style-type: none"> • Action • Adventure • Arcade • Board • Card • Educational • Family • Puzzle • Strategy • Trivia 	<ul style="list-style-type: none"> • Action & Adventure • Chess & Card • Fly & Shooting • Leisure & Quiz • Management & Strategy • Network games • Role playing • Sports & Racing


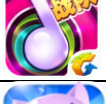

2.2. Game Rankings

Mobile game rankings in China can be considered based on revenue generation or user reviews. Revenue-based ranking can reveal frequent fluctuations that are affected by short-term factors such as company promotions and seasonal marketing strategies. Review-based rankings focus on game design and user experience, and while these are pertinent for aspects of design and production they do not contribute towards the research objectives in this paper. This article will collect data for total download counts, which can more accurately reflect the penetration and popularity of individual games over a longer-term basis, and will serve as a more reliable reflection of the Chinese mobile games market over a sustained period.

Table 2 shows the top 10 most downloaded games across all genres. Due to the mass of games in the Chinese market, games can often possess the same or similar names, thus for the purpose of clarity, logos of the games are also included in the table. All data were retrieved from the various distribution platforms for the respective games during the month of July 2015.

Table 2. Most Downloaded Games Across All Genres

No	Game Title	Logo	Developer	Genre	Total Downloads
1	<i>WeRun</i> (天天酷跑)		<i>Tencent</i>	Sports & Racing	1097 million
2	<i>Temple Run 2</i> (神庙逃亡2)		<i>Imangi Studios</i>	Action & Adventure	512 million
3	<i>Chinese Poker</i> (欢乐斗地主)		<i>Tencent</i>	Chess & Card	434 million

4	<i>Drift</i> (天天飞车)		<i>Tencent</i>	Sports & Racing	425 million
5	<i>Fun Fest</i> (开心消消乐)		<i>Happy Wind</i>	Leisure & Quiz	398 million
6	<i>Rhythm Master</i> (节奏大师)		<i>Tencent</i>	Leisure & Quiz	295 million
7	<i>WeMatch</i> (天天爱消除)		<i>Tencent</i>	Leisure & Quiz	260 million
8	<i>Thunder Fighter</i> (雷霆战机)		<i>Tencent</i>	Fly & Shooting	207 million
9	<i>WeFly</i> (全民飞机大战)		<i>Tencent</i>	Fly & Shooting	185 million
10	<i>Space Hunter</i> (时空猎人)		<i>Yinhan Games</i>	Network Games	162 million
				Total	3975 million









Of the leading 10 games, by far the most dominant title (*WeRun*) is from Sports & Racing, amassing over 1bn downloads (representing 28% of all downloads in the top 10 list). When combined with the other racing title in the list (*Drift*), these two games reveal that the Sports & Racing genre occupy 38% of the top 10 downloads. The next most populous genre is that of Leisure & Quiz, comprising of three titles (*Fun Fest*, *Rhythm Master*, and *WeMatch*) totalling 953m downloads (24% of the top 10). The remaining genres are represented by *Temple Run 2*, of Action & Adventure, amounting to 13% of downloads in the list, *Chinese Poker* from the Chess & Card genre (11%), *Thunder Fighter* and *WeFly* of Fly & Shooting (10%) and finally *Space Hunter* from the Network game genre with 4%. Combined, these three genres represent 38% of the sample: the same proportion as that of the Sports & Racing genre alone. These results therefore indicate some degree of dominance of certain genres, and that titles in the top 10 are not necessarily balanced in terms of download distribution.

Two of these games (*Fun Fest* and *WeMatch*) employ very similar conventions in game design and interface. As with *Candy Crush Saga*, *Fun Fest* and *WeMatch* can be considered as yet another two clones of *Bejeweled* (Kultima 2015) – one of the world’s most popular puzzle games over the past 10 years. *WeMatch* will be studied in more details in section 4.

The findings reveal that neither Role-Playing nor Management & Strategy genres have any titles appearing in the top 10 listing. One possible reason for this is that games from these genres are subject to greater limits in hardware performance and network provisions in mobile devices. Hence, despite the popularity of these genres in PC and console formats (Che & Ip 2012), games from these categories are experiencing fewer downloads than those from

other genres. Thusly, to further the analyses, Table 3 shows the most downloaded titles in each genre. As with the above, game logos are included for clarity due to the potential similarity in the names of titles.

Table 3. Most Downloaded Games from Each Genre

Genre	Game Title Translated	Logo	Developer	Total Downloads
Sports & Racing	<i>WeRun</i> (天天酷跑)		<i>Tencent</i>	1097 million
Action & Adventure	<i>Temple Run 2</i> (神庙逃亡 2)		<i>Imangi Studios</i>	512 million
Chess & Card	<i>Chinese Poker</i> (欢乐斗地主)		<i>Tencent</i>	434 million
Leisure & Quiz	<i>Fun Test</i> (开心消消乐)		<i>Happy Wind</i>	398 million
Fly & Shooting	<i>Thunder Fighter</i> (雷霆战机)		<i>Tencent</i>	207 million
Network Games	<i>Space Hunter</i> (时空猎人)		<i>Yinhan Games</i>	162 million
Management & Strategy	<i>Minecraft</i> (我的世界)		<i>Mojang</i>	118 million
Role Playing	<i>Blade of God</i> (神之刃)		<i>Lion Kong</i>	19 million
Total				2947 million

As can be seen in Tables 2 and 3, two titles – *Minecraft* and *Blade of God* – do not appear on the top-10 most downloaded games of all genres. This further indicates the imbalance that can exist across genres, where *WeRun* (Sports & Racing) has recorded approximately 58 times the number of downloads as *Blade of God* (Role Playing). Additionally, *Blade of God* is nearly 100 million downloads behind the next comparable genre (Management & Strategy). This result provides strong evidence to indicate that Role Playing does not represent a sizeable proportion of mobile game downloads as they may for PC or console platforms.

Out of the 12 titles listed in Tables 2 and 3, 10 are produced by Chinese developers, 1 is by a Swedish developer (*Minecraft*), and 1 is from an American studio (*Temple Run 2*). Only two foreign mobile games have reached the top of the most downloaded list in their respective genres, while only one game (*Temple Run 2*) is present in the top-10 of all genres. This reveals Chinese developers dominate the Chinese mobile games market.





Of the 10 Chinese titles, 7 are developed by Tencent. This indicates the prevailing success of *Tencent* despite the presence of over 23,000 mobile game developers in China for the period between 2013-2015 (Global Mobile Game Confederation 2015). The next section will further explain the nature and role of mobile game publishers in China and the impact of dominant companies such as *Tencent*.

3. Publication of Mobile Games in China

In western markets, access to mobile games is acquired through the platform designated for the proprietary platform: for iPhone users, games are purchased and downloaded via *Apple App Store*, while for Android devices this is done via *Google Play Store*. However, access to both these platforms in China is currently plagued with issues. For Apple, reports indicate users often experience connection problems to the App Store leading to slow downloads or sometimes no service whatsoever. Hence, many Chinese users choose to jailbreak their devices to allow them to freely download apps from the *Apple App Store* as well as to download apps from sources other than the Apply App Store (Sun 2012). Currently, the act of jailbreaking remains a highly controversial issue for Apple mobile devices in China. On the other hand, *Google Play Store* is simply inaccessible in China since all *Google* services are banned by the Chinese Government (Thompson 2006). These phenomena have stimulated the creation of China's own dedicated platforms for mobile app distribution. These platforms are the primary sources for the download of mobile games, which is a unique characteristic of the Chinese mobile market.

Thus, in order to understand the nature of Chinese mobile games, knowledge of these distribution platforms becomes imperative as they serve as gateways for the access of Chinese mobile games. Not only do these platforms have direct impact on the dissemination of mobile games, but they can also influence the popularity and dominance of game titles. Table 4 lists six leading platforms in China for mobile game publication and distribution, which is consistent with the findings in paper (Global Mobile Game Confederation 2015).

Table 4. Leading Platforms for Mobile Game Publications in China

Platform Name Translated	Logo	Website
<i>Tencent App Bao</i> (腾讯应用宝)		http://android.myapp.com
<i>360 Mobile Assistant</i> (360 手机助手)		http://zhushou.360.cn
<i>Baidu Mobile Assistant</i> (百度手机助手)		http://shouji.baidu.com
<i>Mi Game Centre</i> (小米游戏中心)		http://game.mi.com

OPPO Software Centre (OPPO 软件商店)		http://store.oppomobile.com
PP Assistant (PP 助手)		http://www.25pp.com

All six platforms have their own internal teams who provide reviews for the games offered on the platform. Each has their own evaluation criteria, user data, and their own rankings according to aspects such as overall quality and number of downloads. Furthermore, in addition to the existing game genres outlined in Table 1, each platform may sometimes add new genres to attract the attention of players. For example, *360 Mobile Assistant* offered an additional genre called Kids Games, while *Mi Game Centre* defined four extra divisions: Kids Games, Girls-Must-Have, Boys-Must-Have, and Mi-Special.

Of the six outlined in Table 4, the leading platform is *Tencent App Bao* (Global Mobile Game Confederation 2015), which is owned by *Tencent*. The likely reasons for its dominance are that a large number of mobile game titles are developed and published by *Tencent* (as can be seen in successful titles shown in Table 2), and the company has a significant user-base already installed for two of its well-established apps: *QQ* and *WeChat*. Based on statistics from Kemp (2015), *QQ* and *WeChat* are among the global top-five social network apps. Two other dominating platforms of note are *360 Mobile Assistant* and *Baidu Mobile Assistant*. *Qihoo* (parent of *360 Mobile Assistant*) has challenged and competed with *Tencent* vigorously across many commercial aspects over a number of years in modern Chinese cyber history – a recent case can be obtained at Charles River Associates (2015). The success of *Baidu Mobile Assistant* can be attributed to *Baidu* being the largest search engine in China due to the restriction placed on *Google* in the region.

Whilst some platforms may be more popular than others, each allocates varying levels of emphasis on the games that are promoted and distributed on their platforms. Figure 1 shows how different platforms contribute to the downloading counts of 12 game titles mentioned in the previous section. Although it is evident that *Tencent App Bao*, *360 Mobile Assistant*, and *Baidu Mobile Assistant* are three of the leading platforms, for game titles such as *Fun Fest*, the *Mi Game Centre* has made a greater contribution in terms of total downloads than *Tencent App Bao* and *Baidu Mobile Assistant* (see Figure 1). In contrast, a significant portion of downloads for *WeRun* are made via *Tencent App Bao* (the game’s developer) and *Baidu Mobile Assistant*. These figures can be useful for mobile game developers who want to enter the Chinese market. Even though the popularity of a game is directly determined by its own features such as design and interface, Chinese distribution platforms also have great influence on market share and the extent to which they are promoted to users.

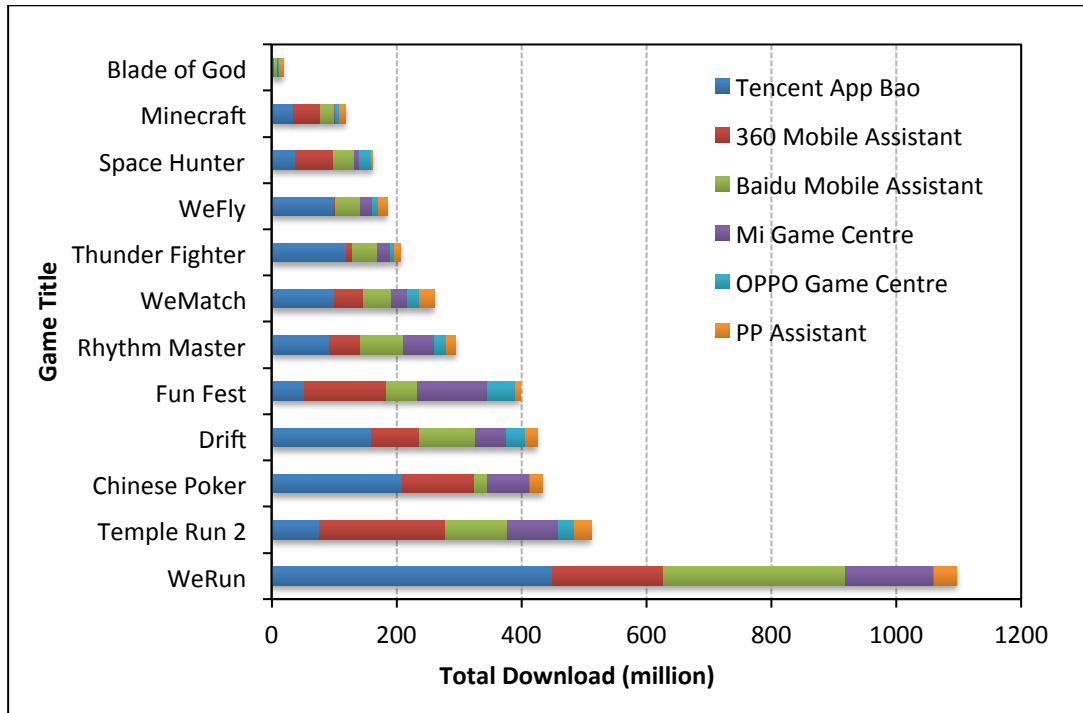


Figure 1. Mobile Game Genre Classifications

4. Game Analysis and Case Study

In this paper, Chinese mobile games will be analysed in three major aspects, as shown in Figure 2. The first dimension is to attract players, which entails importing new players and offering a smooth and trouble-free download experience, which can together be assessed by the download count of individual games. The second aspect is to retain players once they are engaged with the game. This is determined by the appeal of the games, such as the visual design and playing experience that may be influenced by local cultures and game expectations. The next step for retaining players is to employ strategies for data saving such as scoreboards, progress, playing time, etc. Player retention can be assessed by active user counts over a given period. The third and final feature is to generate income. Fundamentally each game needs to entice gamers to play repeatedly with an appropriately sought payment mode. This feature should lead to considerable financial benefits.

These three features will be discussed in greater detail in the following sub-sections. The remaining analysis will use *WeMatch* as a case study for three reasons: first, it is within the top-10 most downloaded games list (as shown in Table 2); second, it belongs to the popular Leisure and Quiz genre and is one of the most successful clones of *Bejeweled*; and third, it is developed by *Tencent* – the largest and most achieved social network company and game developer in China.

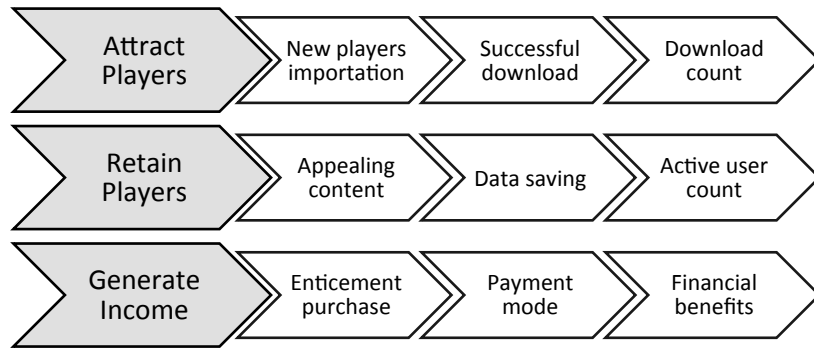


Figure 2. Three Features to Analyse Chinese Mobile Games

4.1. Attract Players

As consistent in other parts of the globe, social networks is a key force for populating mobile games in China. A majority portion (i.e. 66.9%) of Chinese players would acquire mobile games via social network channels, as reported in China Internet Network Information Center (2013). Since two of the world’s most well-known social networks, i.e. *Facebook* and *Twitter*, are banned in China (Chiu et al. 2012), the country has adopted its own unique development and provision of social platforms, namely in the form of *WeChat*, *QQ*, *Weibo*, and so on. Together, they have established a solid foundation for mobile game dissemination in the country.

For the two sibling apps developed by *Tencent* (*QQ* and *WeChat*), the company’s annual report in 2014 showed 829 million active *QQ* users and 438 million active *WeChat* users; the number of simultaneous online *QQ* users reached 200 million on 11th April 2014 (Tencent 2014). With such an enormous user base, companies such as *Tencent* are able to promote their own games within the social apps at relative ease – *WeMatch* being one such example which is ranked the seventh most popular mobile game in China as shown in Table 2. One technique for doing so can be seen in Figure 3(a), where there is a direct entry to the Games section in the main page of the *WeChat* app. This characteristic can help to raise the exposure of the games section of the app. In comparison, while *Facebook* offers a similar feature, this is embedded in the path of *more/APPS/Games*, which is one step further than that of *WeChat*.

Upon entering the games section in *WeChat*, users can see their player profile together with other relevant game promotions that are customised to the user. As shown in the example in Figure 3(b), the user can see the most recent games that he/she has played, games that his/her friends have been playing (this also acts as a subtle invitation to download those games), and hit games that the player may also be interested in. Evidently, the platforms place notable effort in attracting players to download new games and/or to carry on playing existing games.

Another measurement worth noting is the built-in playing feature of the *WeMatch* game. Rather than redirecting users to an app store for downloading, the game was initially integrated within the *WeChat* app when it was first introduced in August 2013. This approach saved users from having to log into an app store, enter credentials, and wait for additional download time. This strategy led to a successful publication of the game, with 40 million registered users within 10 days of release (Tencent Games 2013). As the game grew in popularity, more features were added from where it was eventually separated from the *WeChat* app, although all original user profiles and data were kept intact.

4.2. Keep Players

Research by the Global Mobile Game Confederation (2015) revealed 54.5% of Chinese players would give up on a game if it lacks appealing contents. A user's perception and choice of games are largely affected by cultural and social factors, as indicated by some existing research showing that work and lifestyles in China have led to relatively fixed patterns of when and where mobile games are played. In terms of venue, 85.5% of Chinese gamers play mobile games in the bedroom or dormitories, and in terms of occasion, 77.1% gamers play during home resting hours (China Internet Network Information Center 2013). This explains why leisure games are one of the most popular genres in China, with three titles in the top-10 list (see Table 2). *WeMatch* is a representative example from this genre. Despite its simple rules (similar to *Bejeweled*), *WeChat* can be played in either timer mode or adventure mode. The latter was introduced two years after release, offering interesting features such as gadgets and bonuses. With such a strategy, *WeMatch* reached 25 million daily active users as announced by Zhiping Liu (President of *Tencent*) in August 2013 (Tencent Games 2013).

A contrasting example to this is *Angry Birds*: one of the most successful mobile games in the west, having recorded two billion downloads over the past four years (Wildgoose 2014). However, in China, it has only managed to register 140 million downloads across the six platforms listed in Table 4 based on the data retrieved for this article. The reason for this is that the nature of *Angry Birds* is to relieve stress (Kim & Lee 2013), however stress-relief is not a crucial part of Chinese culture – the findings from Avazu (2014) indicate only 5% of Chinese mobile game players would play games as a means of relieving pressure.

As opposed to stress-relief, the culture of the Chinese gaming community tends towards sharing and competition. Statistics in China Internet Network Information Center (2013) indicate 52.1% of Chinese players would share games with others, and 55.7% of Chinese players would play the games shared by their friends. Chinese players also value score rankings among friends, this being one of the most direct methods of motivating repeated play (Von Ahn & Dabbish 2008). Additionally, research by China Internet Network Information Center (2013) shows 66.8% of Chinese players would watch and participate in a scoreboard of a game, among which 65.2% of these players would compare their own rankings with friends on the scoreboard. Figure 3(c) shows a ranking example for a player and his/her friends in *WeMatch*.

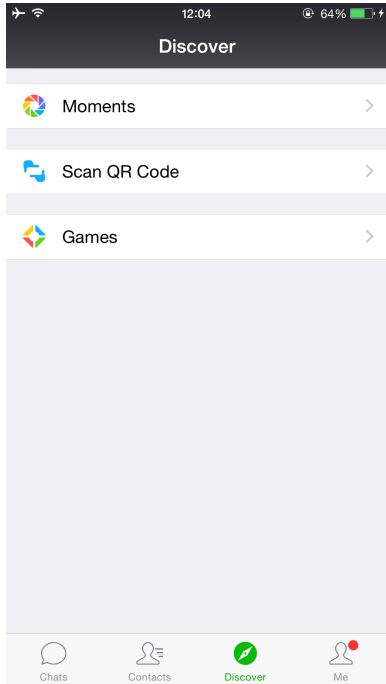
Despite the subjective comment made in the Avazu (2014) report: ‘Chinese gamers love to show off’, this statement can actually be supported by firm evidence. As shown in Figure 3(d), *WeChat* contains a dedicated button that literally translates as ‘show off’ that allows players to advertise their success for a particular level among their friend circle.

4.3. Generate Income

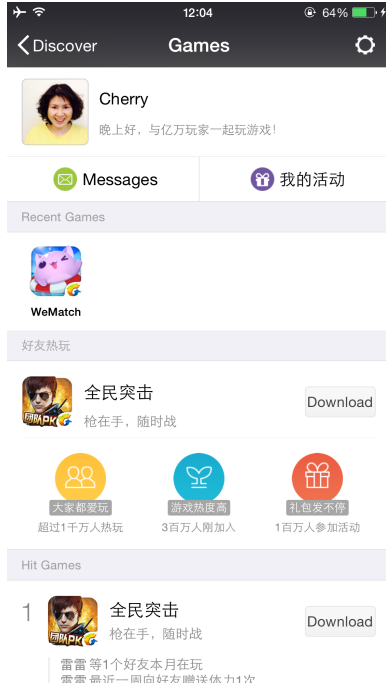
The culture in China is that players typically do not like or expect to pay for games – 84.5% of gamers only play games that are either entirely free or free to download (Avazu 2014). Chinese gamers are, however, willing to spend tremendously during the game to acquire additional features. China Internet Network Information Center (2013) reveals 76.8% of all payments by Chinese players are for the purchase of game tools and equipment, whilst only 17.8% of payments are associated to full game downloads.

Once Chinese players establish a habit of playing a game repeatedly, their propensity for spending more money on the game increases. In *WeMatch*, higher levels become so difficult that players have a greater chance of winning when equipped with special tools and/or gadgets. The game is designed in such a way that it can sometimes be impossible to win unless gadgets are purchased and used – an example of such a scenario is shown in Figure 3(e). Players can purchase items such as extra power, weapons, gadgets, and lives, as shown in Figure 3(f).

The cost of these additional features is often set at very low prices. The average monthly income in Chinese metropolitan areas is 6578 Yuan/m (China Family Finance Survey and Research Centre 2013). With respect to mobile game users, China Internet Network Information Center (2013) found 92.3% of Android gamers and 85.1% of iOS gamers earn around or below that average salary. The price of acquiring a handful of gadgets that would allow a player to easily pass an additional four levels in *WeMatch* is approximately 30 Yuan – the same as the price of a chocolate bar in China. In terms of payment methods, the three leading systems are online banking, *AliPay* (the equivalent of *PayPal* in China), and charge via phone credit (China Internet Network Information Center 2013). With such a financial strategy, *WeMatch* managed to generate an income of 1 million Yuan per day (Tencent 2014).



(a) Direct entry to Games sector in WeChat app



(b) Game promotions in WeChat app



(c) Score ranking among all friends in the circle



(d) Option to show off when passing a level



(e) Level 92 is impossible to play without gadgets



(f) In-store purchase for gadgets and power-ups

Figure 3. Key Illustrations in WeMatch Game Process

5. Conclusions

This paper has outlined some of the unique characteristics of and opportunities within the Chinese mobile games market, which may appeal to potential readers such as western game designers who want to enter Chinese market and understand Chinese mobile games.

The article commenced with presenting genre classifications based on the definitions of the Chinese market as opposed to accepted western conventions, which includes Sports & Racing, Chess & Card, Leisure & Quiz, Fly & Shooting, Management & Strategy, Network Games, Action & Adventure, and Role Playing. Chinese game rankings are also explored based on total download counts, as these are more accurate indicators of long-term popularity. Statistical results reveal some degree of dominance of certain genres, and that titles in the top 10 are not necessarily balanced in terms of download distribution (i.e. that the number 1 game can be vastly superior to even the number 2 or number 3 game in terms of downloads). Role Playing does not represent a sizeable proportion of mobile game downloads as they might for PC or console platforms, a result that may be of some surprise given the general popularity of the genre on traditional gaming systems. Chinese developers can be seen to dominate the Chinese mobile games market, with *Tencent* being the prevailing success.

Chinese publication platforms are the primary sources for obtaining downloads of mobile games: an aspect that is unique to the Chinese mobile market. While some platforms may be more popular than others, each allocate varying levels of emphasis on the games that are promoted and distributed on their platforms, thus influencing game popularity and demand.

A further evaluation of game analysis is made via three dimensions: attracting players, keeping players, and income generation. Social networks remain a key force for populating mobile games in China, with successful examples of *QQ* and *WeChat*, which have established a solid foundation for mobile game dissemination in the country. As opposed to western social networks such as *Facebook* and *Twitter*, Chinese social networks have placed notable efforts in attracting players to download new games and/or to carry on playing existing games. Influenced by cultural and social factors, the Chinese mobile gaming community tends more towards sharing and competition as opposed to stress relief. As may be expected, Chinese players typically do not like or expect to pay for games, although they are (perhaps unexpectedly) willing to spend considerable amounts within the game to acquire additional features. Some mobile games are designed in such a way that higher levels become so difficult that gamers have a greater chance of winning when equipped with special tools and/or gadgets. With often low or certainly affordable prices for the in-game purchase, game companies can gain considerable profits via this avenue. Future research can expand on the formal evaluation of revenue generation by applying commonly known techniques and by providing more detailed case studies of Chinese games to illustrate key aspects of design that may be tailored to suit the unique expectations of Chinese audiences.

References

- Apsalar (2013), 'Top Mobile Game Categories by in-App Purchases & Engagement'. Retrieved 15 July 2015 from <https://apsalar.com/blog/2013/02/top-mobile-game-categories-by-in-app-purchase-engagement/>.
- Avazu (2014), 'China Mobile Game Industry Information Handbook'.
- Charles River Associates (2015), 'Qihoo v. Tencent: Economic Analysis of the First Chinese Supreme Court Decision Under Anti-Monopoly Law', *CRA Insights: China Highlights*.
- Che, Xianhui, & Ip, Barry (2012), 'Packet-level Traffic Analysis of Online Games from the Genre Characteristics Perspective', *Journal of Network and Computer Applications*, 35 (1), 240-252.
- China Family Finance Survey and Research Centre (2013), 'China Family Income Difference Report'. Retrieved 2 July 2015 from <http://chfs.swufe.edu.cn/upload/shourubupingdeng.pdf>.
- China Internet Network Information Center (2013), 'China Mobile Game Users Research Report'.
- Chinese Consultancy Network (2013), 'Analytical Report of Market Research and Investment in Chinese Chess Industry'. Retrieved 10 July 2015 from <http://www.cction.com/report/201307/96298.html>.
- Chiu, Cindy, & Ip, Chris, & Silverman, Ari (2012), 'Understanding Social Media in China', *McKinsey Quarterly*.
- Global Mobile Game Confederation (2015), '2015 Global Mobile Games Whitebook'.
- Kemp, Simon (2015), 'Digital, Social & Mobile Worldwide in 2015'. Retrieved 9 July 2015 from <http://wearesocial.net/tag/statistics/>.
- Kultima, Annakaisa (2015), 'Online games, Casual', *The International Encyclopedia of Digital Communication and Society*.
- Kyoung-nam, Kim, & MyounJae, Lee (2013), 'A Study on the Factors and Production Methods for Effective User Experience Design: Based on Angry Birds, a Smartphone Game', *Advances in Information Sciences and Service Sciences*, 314-321.
- LocalizeDirect (2014), 'Game Rule the iTunes App Store: Most Popular Genres Revealed'. Retrieved 15 July 2015 from <http://localizedirect.com/posts/most-popular-game-genres-revealed/>.
- Sina Finance (2015), 'Chinese Poker Industry Development Status and Dynamics'. Retrieved 30 June 2015 from <http://finance.sina.com.cn/stock/t/20110504/09109788934.shtml>.
- Sun, Yan (2012), 'Legal Debate of iPhone Jail-breaking Issues', *Ali Research*.

Tencent (2014), 'Annual Performance Report'. Retrieved 20 July 2015 from <http://www.tencent.com/zh-cn/ir/reports.shtml>.

Tencent Games (2013), 'WeChat Reaches 40 Million Registered Users 10 Days After Release, with 25 Million Active Users per Day'. Retrieved 21 July 2015 from <http://games.qq.com/a/20130815/006511.htm>.

Thompson, Clive (2006), 'Google's China Problem', *The New York Times*.

Von Ahn, Luis, & Dabbish, Laura (2008), 'Designing Games With a Purpose', *ACM Communication Magazine*, 51(8), 58-67.

Wildgoose, David (2014), 'Angry Birds Has as Many Active Players as People Registered on Twitter'. Retrieved 21 July 2015 from <http://www.mcvpacific.com/news/read/angry-birds-has-as-many-active-players-as-people-registered-on-twitter/0127024>.