

A Study of Fun in Computer games

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Abstract:

Player enjoyment is the most important goal for computer games. This study focuses on the factors that create fun within computer games and an investigation into whether games can be designed and developed to incorporate fun. It is a concept which has never been addressed and the results could significantly affect the way computer games are designed and developed. A review of all relevant literature was conducted and a framework for fun within computer games was developed. A case study of one of the world's most famous computer games, Tetris, was undertaken, the version being the Tetris Friends application on the social networking website, Facebook. Participants, who have had a wide range of experience with the game, were acquired to complete a questionnaire and a data analysis of the results was conducted allowing the development of a final framework for fun in computer games.

Declaration

I accept this document represents my own work except where otherwise stated.

Signed Date

Acknowledgements

I would like to take this opportunity to extend my thanks to all those who have helped me and been a constant source of encouragement throughout the duration of this project, in particular my supervisor and tutor Dr. Jeff Yan for always being there as a source of guidance and constructive criticism and offering valuable advice.

Contents

1. Introduction	7
1.1 Introduction to gaming	8
1.2 Project aims and objectives	9
1.3 Project description	9
1.4 Tetris	10
1.4.1 <i>History of Tetris</i>	10
1.4.2 <i>Tetris Friends</i>	10
1.4.3 <i>Why Tetris Friends?</i>	10
2. Literature Review	12
2.1 Why is fun important in games?	13
2.2 What makes games fun?	13
2.2.1 <i>Goals and challenges</i>	13
2.2.2 <i>Immersion and Escape</i>	14
2.2.3 <i>Hedonic Components</i>	14
2.3 Fun elements of Tetris	14
3. Experiment Design	17
3.1 Creating the framework for fun in computer games	18
3.2 Framework for fun in computer games	20
3.3 Questionnaire justification	21
3.4 Questionnaire of fun in computer games	24
3.5 Creating the website	30
4. Data Analysis	33
4.1 Data Analysis	34
4.2 Validity of results	34
4.3 Goals	35
4.4 Challenge	36
4.5 Hedonic Components	37
4.6 Addictiveness	38
4.7 Social interaction	39
4.8 Further Observations	40
4.9 Creating the final framework for fun in computer games	44
4.10 Final framework for fun in computer games	45
5. Evaluation	47
5.1 Achievement of project objectives	48
5.2 Success of the project	49
6. Conclusion	50
6.1 Project Summary	51
6.2 What I have learned	51
6.3 Future Work	52
7. References	53
8. Appendices	56

8.1	Website screenshots	57
8.1.1	Homepage.....	57
8.1.2	Questionnaire page.....	58
8.1.3	Submitted questionnaire page.....	62
8.1.4	Project Page.....	64
8.1.5	Contact Page.....	65
8.1.6	Submitted contact page.....	66
8.2	Website source code listing.....	67
8.2.1	Index.html.....	67
8.2.2	Questions.html.....	71
8.2.3	Results.php.....	81
8.2.4	Project.html.....	88
8.2.5	Contact.html.....	91
8.2.6	Contactposted.php.....	95
8.2.7	Viewresults.php.....	99
8.2.8	Viewcomments.html.....	101
8.3	Questionnaire Responses.....	102
8.3.1 - 8.3.4	Participants 1 – 40.....	102-145

Chapter 1

Introduction

1.1 Introduction to gaming

Everyone at one point or another has had an experience with gaming. There are many different variations of gaming that are accessible almost anywhere. Most people perceive gaming in the context of games consoles or personal computers. However, the rise in mobile devices with gaming ability now means that gaming is possible to anyone, anywhere.

The computer games industry has continued to grow over recent years. It is estimated that around 65% American households play computer or video games [ESA annual report] and there are over 260 million PC gamers worldwide, and that should grow to close to 350 million by 2012 [DFC Intelligence]. In 2008, total video game console unit shipments reached 88 million worldwide, up 7% from worldwide unit shipments in 2007 [In-Stat].

More and more money is being spent on computer and video games each year. In 2007 9.5 billion dollars were spent on computer and video games compared to 7.4 billion dollars in 2006 [ESA annual report].

There is an increasingly diverse range of people playing computer games. The variation in games that are available today means games appeal to people both young and old. The average game player age is 35 [ESA annual report].

With so much money being invested in computer games by so many different people it is increasingly important that these games are fun for players.

1.2 Project aims and objectives

Aims

- To explore fun as an aspect of interaction design.
- To find out what makes games fun and how games can be designed and developed to incorporate fun.
- To explore methods of measuring fun in computer games and if it can be achieved.

Objectives

- To develop an evaluation framework for fun in computer games.
- To evaluate fun within computer games.
- To gather and analyse data relating to a specific game. I will use the data to relate findings back to the aims of the project.

1.3 Project Description

The project is broken down into three main subtasks; a literature review, an experiment phase and a data analysis phase.

The purpose of the literature review was to provide a thorough background to the study. It allowed me to establish previous findings and distinguish what has already been done from what needed to be done. It also helped me to identify methodologies and techniques that have been used.

Throughout the literature review I conducted analytical reading and evaluation of relevant documents.

This reading meant I could establish why people play computer games and what makes computer games fun as well as gaining insight into the fun elements of Tetris. Consequently I was able to produce a concise framework for fun in computer games. This framework contained all the relevant points that computer games should include for a game to be fun.

The experiment phase allowed me to gather data which I could later analyse. For the experiment I acquired volunteers who had experience with the Tetris Friends game. They were required to complete a questionnaire relating to the game. Some questions related specifically to the Tetris Friends version of Tetris, some to Tetris in general and some general questions about fun in computer games. The questionnaire was located online on a website that I produced.

Upon completion of the experiment phase I could then begin the data analysis phase. This stage of the project involved analysing the data acquired from the questionnaire and thoroughly evaluating my findings, relating back to the project aims and objectives. The process allowed me to identify trends and strong correlations between the answers given by the participants. I was also able to shed more light of part on certain aspects games that had been considered fun before but not reflected upon in great detail. Analysing the data also allowed to me to make new assumptions regarding fun within computer games. Consequently, I was able to produce a final framework for fun in computer games which integrated the points from the literature along with the new assumptions from the data analysis.

1.4 Tetris

1.4.1 History of Tetris

Tetris was originally designed and created by Alexey Pajitnov in June 1985. In January 1988 Tetris was released for all home computers. It gained glowing reviews and sold quickly in computer stores [Atari HQ].

Tetris has been the subject of many legal battles with different companies battling to secure the rights for the game. In 1989 Nintendo won a court case against Tengen, claiming the rights to the game. Later that year Nintendo's version of Tetris for the Nintendo Entertainment System (NES) is released and around three million were sold in the US. At the same time, the Game Boy, with Tetris as the pack-in, was being sold. Around 30 million Game Boy Tetris cartridges have been made [Atari HQ].

Today Tetris is more widely available than ever before. It is available on all games consoles and hand held consoles as well as mobile phones and MP3 players. There are also numerous free online versions of the games including the version I am to focus on in the case of this project, Tetris friends.

1.4.2 Tetris Friends

For my case study I shall be using the 'Tetris Friends' version of the game. Tetris Friends features several different game modes. The game is available online via the Tetris Friends official website or through the social networking website, Facebook.

1.4.3 Why Tetris Friends?

In order to get the most from the project I needed to choose a game that could be analysed specifically to relate back to my project aims and objectives. Tetris has an extremely basic format

and is very easy to learn how to play. A simple game like Tetris would be ideal to analyse as each aspect of the game can be clearly analysed thoroughly.

Tetris is one of the most popular computer games ever created. It is a game that many people have heard of or have some degree of experience with and is renowned for being fun to play. This is an important factor so I could get a wide range of data in order to analyse the game as effectively as possible.

Tetris Friends adds a unique social interaction element to the game unlike any other version of Tetris available. The game compares players against their friends ranking them by who achieved the best time or highest score. This part of the game would be extremely useful especially for evaluating the social interaction side to computer games, an area reflected upon very little in the literature.

Chapter 2

Literature Review

2.1 Why is fun important in games?

The importance of fun in computer games cannot be stressed enough. Player enjoyment is the single most important goal for computer games [Sweester and Wyeth 2005]. A game is bought on a voluntary basis purely for entertainment value and thus if a game is not fun to play, it will not sell in the market place [Federoff 2002]. Similarly, if players do not enjoy the game, they will not play the game [Sweester and Wyeth 2005].

Considerable care is required in the game design process [Federoff 2002]. Computer game developers want to see a return on the finances, time and resources invested into the production of their games. These reasons alone should provide sufficient motivation for designers to ensure their game is fun for users to play.

2.2 What makes games fun?

It is difficult to understand what makes games fun. Fun has no metrics. Therefore, it is impossible to measure how fun a computer games is. In games satisfying every user is really tough [Shneiderman 2004]. Everyone has their own interests. So it is very unlikely that a game will appeal to everyone.

2.2.1 Goals and Challenges

Users play games to achieve a goal [Federoff 2002]. Simple games should provide an obvious goal. Usually the more obvious and compelling the goal is, the better [Malone 1980]. Challenge is the most talked about aspect of fun in computer games in the literature. If there is no challenge to the player while obtaining the goal, the game is boring and not fun. Offering challenge and the opportunity to master a skill seems to provide sufficient motivation for people to engage in games. The resulting satisfaction makes the activity fun [Federoff 2002]. Games should be designed to have a level of challenge that is appropriate and not discouragingly hard or boringly easy [Sweester and Wyeth 2005]. For an activity to be challenging, it needs to have a goal whose outcome is uncertain [Malone 1982]. A game is usually boring if the play is either certain to win or lose [Malone 1980]. For games to be enjoyable, they must support player skill development and mastery. However, the perceived skills of the player must match the challenge provided by the game [Sweester and Wyeth 2005].

Goals and challenges are captivating because they engage a person's self-esteem. Success in a computer game can make people feel better about themselves. The opposite side of this principle is of course, failure in a challenging activity, like a computer game can lower a person's self-esteem and, if it is severe enough, decrease the person's desire to play the game again [Malone 1980].

Players should experience feelings of personal triumph [Lazzaro 2004]. With this in mind it is safe to assume that games should aim to maintain high levels of self-esteem within the player in order to encourage the user to continue playing the game. The player must be able to tell whether they are getting closer to the goal [Malone 1980]. If this is not achieved within the game it could be detrimental to a player's self-esteem and they will become bored and stop playing. In order for this condition to be satisfied players should always be able to identify their score and status in the game and receive appropriate feedback at appropriate times [Federoff, 2002; Sweester and Wyeth 2005].

2.2.2 Immersion and Escape

Games provide entertainment through escape. In order to create immersion in an interactive environment we must make the user actually forget they are participating through a medium [Federoff 2002]. Games are often seen as a form of escape from the real world or social norms [Sweester and Wyeth 2005]. Satisfying sounds are a vital addition for games [Shneiderman 2004]. These sounds could help users become immersed within the environment. For example, within a football game, the noise from the crowd, commentary and ball as it is struck by a player.

2.2.3 Hedonic Components

Including hedonic components (task-unrelated graphics, colour and music) increased an information systems enjoyment and usage. Similarly, the perception of hedonic quality (task-unrelated aspects such as novelty or originality) substantially contributed to the overall appeal [Hassenzahl, Bea and Burmeister 2001]. This could be considered within games. Would adding hedonic components within games make them more fun? However, designers need to introduce novelty with care. User interfaces that are too novel and unfamiliar are likely to evoke strong adequacy concerns instead of hedonic quality perceptions [Hassenzahl, Bea and Burmeister 2001].

2.3 Fun elements of Tetris

In order to use Tetris effectively as a case study it is important that I am fully aware of the fun elements within the game. This will ensure that I set appropriate questions within the questionnaire. It may also shed some light on the fun elements within games and points I can include in my framework.

Tetris has a universal appeal. It is popular with a wide range of ages and is a game that has crossed the gender gap [Falstein 2004]. It is also not interest specific. This shows that the game does not appeal to any particular type of person. This is a significant reason Tetris is so popular and could potentially contribute to the fun within the game.

One characteristic a lot of modern games include is a storyline or plot. Tetris is about as story-free as a game can get [Falstein 2004]. This could draw interesting conclusions on the extent in which, if any, a storyline or plot contributes to fun within computer games.

Tetris requires intelligence and quick decisive thinking in order to achieve high performance. The essence of intelligence is the perception and manipulation of patterns. Tetris excels in letting us exercise this ability [Falstein 2004]. Therefore it would be interesting to determine whether stimulating the intelligence of a player contributes to fun within computer games.

The simplicity of Tetris contributes greatly to the fun within the game. Its core gameplay is so simple, even your mum knows how to play it [Dredge 2006]. A lot of the fun in Tetris lies with how simple it is to begin playing the game but how difficult it is to master. It is remarkably simple yet remarkably difficult [Atari Gaming Headquarters]. The simplicity of the games means the game is timeless and it never becomes outdated, unlike a lot of modern, expensive games. This could draw interesting conclusions on whether simplicity within games is an important factor contributing to the fun within computer games.

Another factor contributing to the fun within the game is the “addictive” nature of the game. Tetris is the most addictive puzzle game ever invented [Dredge 2006]. Addictiveness is a concept which could contribute significantly to fun within computer games. Exploring this concept could determine whether, for a game to be fun, it must be addictive for players.

Due to the fact I am using Tetris Friends for the case study for this project, social interaction is also relevant as a fun element within Tetris. There are various social interaction features within Tetris friends. On the main page it is possible to scroll through the various games. As each game is highlighted the top 8 ranked friends appear at the bottom of the page along with their score or time. As you are playing a game your current status among your friends is shown to the right of the screen. As your score increases you move up along your friends until the game ends. Similarly, in a timed game, the longer you take to complete the game the further you move down among your friends.

Leader boards are also a feature within the game. When accessing the leader board it first shows your rank among your friends on the game. However, it is also possible to view your rank among the highest scoring players on the game. It is also possible to view your rank of the best scores daily and weekly. These various leader boards can be accessed for any of the games within Tetris Friends.

The fact that players are constantly being compared against their friends within the game provides significant motivation for the player to continue playing the game in an effort to better their score or

time and improve their rank among their friends. This element significantly contributed to the fun within the game.

It is possible to challenge friends within Tetris Friends. However, this challenge does not take place live. A player issues a challenge and plays the game. The opponent plays their half of the battle when they are next online on Tetris Friends. It is also possible to invite your Facebook friends to play Tetris friends.

In Heidi Burgiel's paper 'How to lose at Tetris', she mathematically proves that all Tetris games must eventually end. In a Tetris game, any player will lose after playing at most 69,600 Tetrominoes [Burgiel 1997]. With this in mind, it means that a player is unable to "win" the game like they would a conventional computer game. Therefore players are destined to fail and are striving to win a game which is impossible to win. This questions one of the most prominent points in the literature, that a player must experience success within a computer game in order to find it fun. This point also questions whether computer games require a goal and if it is necessary for players to achieve goals to find the game fun. This evidence may also provide one of the most significant reasons that Tetris is so compelling to play. If players are unaware that it is impossible to complete the game they will continue attempting to "win" the game.

Chapter 3

Experiment Design

3.1 Creating the framework for fun in computer games

The framework for fun in computer games is an explicit set of points that I believe contribute to fun within computer games. In order to create the framework for fun in computer games I had to select what I considered to be the most relevant points in the literature and compile them into a framework. The framework has been broken down into several sections, each of these containing points relating to that particular section. Ideally, the framework could be consulted during the design and development phases when creating a computer game. If the game is designed to include the criteria within the framework it would ensure the game is fun to play and in turn achieve a greater level of success.

Goals and challenge within computer games are the most significant points reflected upon in the literature. The two points go hand-in-hand and thus I have coupled these two points into one section within the framework.

The first point within the Goals/Challenge section states that there should be a goal to the game. This is a point reflected on in nearly all the literature. Similarly, these goals should be obvious and compelling to the player. A player should receive performance feedback i.e. they should be able to tell if they are getting closer to achieving the goal. This can be achieved by always making the player aware of their status or score.

One of the most significant points in the framework is that it must be a challenge for the player to achieve a goal. This is for the simple reason that if it is not challenging for the player to achieve the goal within the game, they will become bored very quickly and stop playing the game. A way that this can be addressed is ensuring that the outcome of the goal is uncertain. This ensures that a player is never certain to win or lose. This factor takes the predictability out of the game creating a greater challenge for the player and encouraging continued play.

A way that the concept of challenge has been addressed in the framework is that a game should have successive layers of complexity. This means that the game can provide the appropriate level of challenge to the player depending upon their skill level. This can be achieved in various ways.

Variable difficulty levels ensure that the player plays at the right difficulty level according to how skilled they are at the game. These levels should be either selected by the player or altered automatically in accordance to how well a player performs. Multiple level goals are another way successive layers of complexity can be addressed. These can include score keeping, in which a player tries to achieve the best score possible or speeded responses, in which a player attempts to do a task as quickly as possible.

Immersion is a factor points heavily reflected upon frequently in the literature. A player should become immersed within the games environment. This requires that the player forgets they are participating through a medium and the players focus is maintained throughout the game. The environment should also not be too complicated or simple with respect to the users existing knowledge. If it is too complicated the user will be unable to become immersed within it. If the environment is too simple the player will not have the desire to become immersed within the environment.

A game should also provide the opportunity of escape for a player. This means that the player's primary consideration should be the game in hand and they consequently can escape from matters in everyday life.

Self esteem is a point reflected only once in the literature but I believe it to be a very valid point concerning fun in computer games. I believe it to be essential that the game should engage and maintain a player's self esteem. This can be achieved by the subsequent points in the framework stating that a player should always achieve a certain amount of success whilst playing the game and not encounter a severe amount of failure. If a player does not achieve any level of success they will become bored of the game. Similarly, if a player experiences a severe amount of failure they will lose the desire to continue playing the game.

Hedonic components within games are often not considered as reasons why a game is fun. In fact the majority of the time these components go unnoticed by the player. However, I believe hedonic components are vital additions to games and can significantly add to the amount of fun experienced by the player. To satisfy this I have stated that the game should include task-unrelated aspects such as novelty, originality, randomness and humour. However, I have explicitly stated that the game should not be too novel or unfamiliar otherwise it could cause confusion and result in the player not finding the game fun. I have also stated that the game should include satisfying sounds and music as well as desirable graphics and colour.

Social interaction is reflected upon very little in the literature. However, I believe it is a very important factor concerning fun within computer games. Therefore, I have specified that games should allow players to compete with or against one another. I have also stated that players should feel a sense of competitiveness when competing against another player. If a game is fun a player should want to be better than the player they are competing against. Players should also have incentives to compete against one another. These can be in the form of leader boards or rewards attained for good performance.

3.2 Framework for fun in computer games

Table 1: Framework for fun in computer games

Section	Game Objectives
Goals/Challenge	<ul style="list-style-type: none"> • There should a goal to the game <ul style="list-style-type: none"> ○ The game should have obvious, compelling goals <ul style="list-style-type: none"> ▪ The player should get performance feedback <ul style="list-style-type: none"> • The player should be able to tell if they are getting closer to the goal • The player should always be aware of their status or score ○ It should be a challenge to achieve the goal <ul style="list-style-type: none"> ▪ The outcome of the goal should be uncertain. <ul style="list-style-type: none"> • The player should not be certain to win or lose • The game should provide the opportunity to master a skill • The game should have successive layers of complexity <ul style="list-style-type: none"> ▪ Variable difficulty levels <ul style="list-style-type: none"> • Either selected by the player • Or in accordance to how well the player does ▪ Multiple level goals <ul style="list-style-type: none"> • Score keeping • Speeded responses
Immersion	<ul style="list-style-type: none"> • The player should become immersed within the environment <ul style="list-style-type: none"> ○ The game should maintain the players focus throughout the game ○ The player should forget they are participating through a medium ○ The environment should not be too complicated or simple with respect to the users existing knowledge
Escape	<ul style="list-style-type: none"> • The game should provide the opportunity of escape to the player <ul style="list-style-type: none"> ○ The players primary consideration should be the game in hand ○ The player should be able to forget matters in everyday life
Self-esteem	<ul style="list-style-type: none"> • The game should engage and maintain a players self esteem <ul style="list-style-type: none"> ○ The player should be able to achieve some level of success ○ The player should not encounter severe failure
Hedonic Components	<ul style="list-style-type: none"> • The game should include hedonic components <ul style="list-style-type: none"> ○ The game should include task-unrelated aspects such as novelty, originality, randomness and humour <ul style="list-style-type: none"> ▪ The game should not be too novel or unfamiliar ○ The game should include satisfying sounds/music ○ The game should include desirable graphics/colour
Social Interaction	<ul style="list-style-type: none"> • The game should allow players to compete with or against one another • The player should have incentives to compete against another player <ul style="list-style-type: none"> ○ Leader boards ○ Rewards

3.3 Questionnaire Justification

The questionnaire provided the opportunity parallel the points within the framework to a specific game, in this case Tetris friends. Through the responses I would be able to analyse how valid the points are in the framework and make further assumptions as to what the contributing factors to fun within computer games are. The questionnaire also provided the opportunity to present open ended questions to participants in order to gain their opinions and views on what makes Tetris so fun to play and the factors that contribute to the creation on fun in computer games.

In order to obtain the most relevant information from the participants the questions needed to explicitly relate to the points in the framework as well as to Tetris Friends and fun in games in general.

The opening questions are used to assess the validity of the answers given in the questionnaire. For example, someone who plays the game every day may provide more relevant answers to someone who only plays the game once a month. The same applies to the second question, if the person filling in the questionnaire has had a lot of experience playing Tetris in the past, their responses may provide a greater insight into the fun elements of Tetris and fun in computer games in general. Questions 3 and 4 are a measure of how much they enjoyed playing the game. I expect that players who answer more positively in these questions will provide more relevant answers throughout the questionnaire.

Question 5 asks the player what they believe to be the most fun aspects of the game. The feedback from this question should provide useful information concerning the fun elements of Tetris and why it is fun to play.

Question 6 addresses whether a player thinks there is a goal to the game and what they think it is. The framework states that there should be a goal to the game and that simple games should provide obvious goals. Therefore, asking the player what they think the goal is may provide more accurate feedback as to whether the goal of the game is obvious. The framework states that player should be able to tell if they are getting closer to the goal. Question 7 is used to assess the extent in which players felt they were getting closer to achieving the goal. Question 8 asks how challenging the player found the game. The framework states that it should be a challenge for the player to achieve a goal. Therefore, more positive answers with regards to this question will be those who select quite challenging and very challenging.

Question 9 directly addresses another point in the framework, that the game should provide the opportunity to master a skill. The question addresses to what extent players felt this was true in Tetris. Question 10 addresses the point in the framework that states the game should provide the opportunity to master a skill. In addition to question 10, question 10.1 allows players to explain why the game did not provide appropriate levels of difficult if they disagreed with question 10. The framework states that a player should always be aware of their status or score. Question 11 directly addresses this point by asking if the player was always able to tell how they were doing whilst playing.

Question 12 is a very important question relating to immersion within the game, an important part of the framework. In order for the player to become immersed within the environment the game should maintain the player's focus throughout the game. Therefore, question 12 asks whether the game maintained the player's full attention while playing. The framework states that the environment should not be too complicated or simple with respect to the users existing knowledge. Question 13 addresses this point by asking the player if it was easy to learn how to play the game.

Question fourteen provides the player the opportunity to state how successful they were in the game. Usually those who achieve greater success in the game would have found the game more fun to play. The responses to this question will provide valuable insight as to whether a player needs to be successful in a game to find it fun.

Questions 15-21 address the hedonic components with the game. The framework states that the game should include satisfying sounds and music as well as desirable graphics and colour. Questions 15-17 address these points. The framework also states the game should include task-unrelated aspects such as novelty, originality, randomness and humour. Questions 18-21 address these points individually and the participant can agree or disagree with these statements. These questions will provide useful insight as to whether players notice these aspects within the game and the extent that they add to the fun within computer games.

Question 22 asks players if they found themselves becoming "hooked" or "addicted" to the game. These are terms which are used very frequently within modern gaming. However, it is at present uncertain why this happens. Question 22.1 addresses this issue by asking players why they think this was. The answers to this question could provide extremely useful insight into what creates fun within computer games.

Questions 23-25 address the issue of social interaction. Question 23 asks players whether they felt the social interaction aspect of Tetris added to the fun of the game. Question 24 asks whether the

player feels competitive when playing against other players and whether this adds to the fun of the game. Question 25 asks whether being the best of a group of friends is a key incentive to playing computer games. The answers to these questions could provide extremely useful insight to the social interaction element within computer games. It would be expected that those who agree with question 23 will also agree with questions 24 and 25.

The final questions are open ended in order to gain the opinions of the players and provide addition insight into what makes Tetris and computer games in general fun. Question 26 is used to acquire further information on the fun elements in Tetris. Question 27 is a way of gaining additional insight into what makes computer games fun. Although question 28 is asking what the player would add to make the game more fun it is also an effective of gaining additional information on what the player thinks are fun elements in computer games.

3.4 Questionnaire for fun in computer games

1. On average, how often do you play the game?

- Everyday
- Every other day
- Once a week
- Once a month

2. How much experience do you have with Tetris?

3. How much fun do you find the game?

- Extremely good fun
- Good fun
- Average amount of fun
- Not much fun
- Not fun at all

4. Will you play the game again and if so how often?

5. What do you think are the most fun aspects of the game?

6. Do you think there is a goal to the game and if so, what do you think it is?

7. Whilst playing you felt like you were getting closer to achieving the goal

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

8. How challenging did you find the game?

- Very Challenging
- Quite Challenging
- Somewhat challenging
- Not Very Challenging
- Not challenging at all

9. The game provided an opportunity to master a skill

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

10. The game provided appropriate levels of difficulty

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

10.1. If you either disagreed or strongly disagreed, please explain why

11. You always able to tell how well you were doing whilst playing

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

12. The game maintained your full attention while playing

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

13. It was easy to learn how to play the game

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

14. How successful were you in the game?

15. The game made good use of sounds and music

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

16. The game made good use of colour

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

17. The game made good use of animation

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

18. The game included a good amount of novelty

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

19. The game included a good amount of originality

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

20. The game included a good amount of randomness

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

21. The game included a good amount of humour

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

22. You found yourself becoming "hooked" or "addicted" to the game

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

22.1 Please explain, why you think this was

23. Social interaction (competing against other players) added to the fun of the game?

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

24. Do you feel competitive when playing against other players?

- Yes
- No

24.1. If yes, do you think this added to the fun of the game?

- Yes
- No

25. Being the best out of your friends is a key incentive to keep playing computer games

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

26. Why do you think Tetris is such a popular game?

27. What do you think makes computer games fun?

28. What would you do to make the game more fun?

3.5 Creating the website

The primary purpose of the website was that people participating in the experiment could access and complete the questionnaire online. Locating the questionnaire online proved effective as I was able to acquire suitable participants to complete the questionnaire and reach a large number of people with relative ease. This ensured that more valid and useful responses were acquired. Another benefit to locating the questionnaire online is the large reduction in paperwork compared to a questionnaire completed by hand. The website was also useful because it allowed anyone who had any queries regarding the project to easily contact me.

The Tetris Friends application on Facebook contains discussion boards where players can discuss any aspect of the game with each other (see Figure 1). This seemed like an ideal way to interact with players and acquire them to complete the questionnaire. By making people aware of the experiment through the discussion boards I was ensured a wide range of people would complete the questionnaire. Firstly, I was assured that all those who completed the questionnaire would have experience with the Tetris Friends version of the game and I would also get responses from people who had a lot of experience with the game as well as people who have little experience. This allowed me to acquire a diverse range of responses so I could analyse the data more accurately and produce more concise conclusions. The response was overwhelming with many people completing the questionnaire in significant detail. The website is also indexed by Google and be accessed by anyone on the World Wide Web (see Figure 2).




Figure 1: Tetris Friends discussion board

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Play Free Online **Games**, sports **games**, massive multiplayer **games**, action **games**, puzzle **games**, flash **games** and more, casual **games**.


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[Stuart Little - A study of fun in computer games](#)  

... Systems Undergraduate at the School of Computing Science at Newcastle University conducting my final year project on 'A study of fun in computer games'. ...

homepages.cs.ncl.ac.uk/s.r.little/ - 5k - [Cached](#) - [Similar pages](#) - 

[Stuart Little - A study of fun in computer games](#)  

24.1 If yes, do you think this added to the **fun** of the **game**? Yes No. 25. Being the best out of your friends is a key incentive to keep playing **computer** ...

homepages.cs.ncl.ac.uk/s.r.little/questions.html - 15k - [Cached](#) - [Similar pages](#) - 

[More results from homepages.cs.ncl.ac.uk](#) »

Figure 2: Website indexed by Google

I wanted the website to have a simple yet elegant design. The website could not be overcomplicated as it needed to be easy for users to understand and navigate their way around. With this in mind I opted for a simple design with a banner, navigation and content box. Users could navigate their way around the page easily with the links in the navigation and all information concerning the project would appear in the content box. I adopted the design of the navigation from a design created by Tomek Garbiak on the Listamatic website [15]. I selected this because of its elegant style and because it is supported by all of the main Internet browsers [14]. The 'Stuart Little' logo on the top banner was adapted from an Adobe Photoshop tutorial on the Verbaska homepage [23]. The logo is professional and elegant and colours corresponded with those of the website layout.

It was essential that when a user accessed the website they knew instantly what the project was about. I aimed to achieve this by including images of Tetris as well as the Tetris logo from the Tetris Friends homepage [20]. This also added some aesthetic value to the page adding a greater amount of colour. In order to give the page an elegant look I opted for red and black colour scheme on top of a plain white background. This made the content stand out as well as giving the website a professional look.

The general layout of the site was created using a Cascading Style Sheet (CSS). The CSS was used to create four main sections; a header section where the main banner is located, a navigation section where the links are located, a content section and a footer section where the copyright disclaimer is located. I also used CSS to create the style for the heading and paragraph fonts. Within the sections I used Hyper Text Mark-up Language (HTML) to enter the content.

At the user end, the website consists of six pages. The homepage simply provides information to the user about the project and instructions on how to complete the questionnaire. The questionnaire page contains the questionnaire for the project. Upon completion of the questionnaire the site return a results page where the user can view the results they entered into the questionnaire. The project page will contain the project available for users to download upon completion. The contact page provides an opportunity for users of the website to contact me if they have any questions or comments regarding the project or the content of the website. When a comment has been submitted there is a confirmation page stating the comments has been successfully submitted.

In order to gain responses from the questionnaire into a format where I could analyse the results I needed to program for data collection. The form in the questionnaire was created using HTML however I needed somewhere I could store the results. I achieved this using Hypertext Pre-processor (PHP). The PHP wrote the results submitted by the user to a text file stored in my directory. However, even though I was able to access the results submitted by users it would still be difficult to analyse them effectively. Therefore I created another page where I could view the results in table form. This again was achieved using PHP. Each submission of the questionnaire created a new row in the table with every question in a separate column. This meant I could look down each column comparing the answers in the questionnaire. This was a much more effective way to conduct the data analysis.

I also used this technique to create an effective way to receive comments from users. Again the form for the comments page was created using HTML and when submitted the information is written to a text file using PHP. Again I created a page as an easier way of viewing any comments, in the same way as the results.

Chapter 4

Data Analysis

4.1 Data Analysis

The questionnaire received 40 responses at the point in which data analysis was to take place. After receiving responses to the questionnaire I could then collate and analyse the data. I have identified trends in the data, allowing me to arrive at a number of interesting conclusions.

4.2 Validity of results

The opening questions were used to assess the validity of the responses given by the participants. The more valid the answers were, the most precise the conclusions that could be drawn. Question 1 asked how often participants played the game. The vast majority of participants claimed to play the game every day or every other day, shown in figure 3.

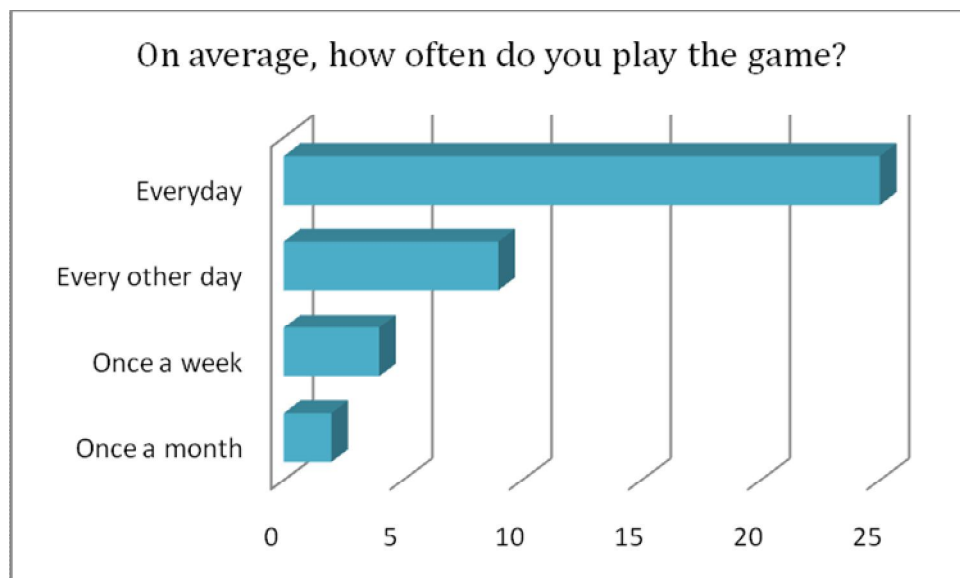


Figure 3: Question 1 Results

Question 2 asked how much experience the participants have with Tetris. There were a variety of responses to the question and many of these responses fell along the same lines. Many people claimed to have played Tetris for many years or as a child. Many people mentioned that they had experience with alternate versions of the game. In particular participants reflected on that they had first been exposed to the game through the Nintendo Game Boy. Only two of the responses claimed to have recently been exposed to the game.

Question 3 was a measure of how much the players enjoyed the game. Of the 40 responses acquired, 93% of the responses chose Tetris Friends as 'extremely good fun' or 'good fun'. None of the participants answered 'not much fun' or 'no fun at all'.

Question 4 asked the participants if they will play the game again and if so, how often. 100% of participants said that they would play the game again with the vast majority stating that they will continue to play the game every day. Many people also said they will play the game whenever they get the opportunity or have any free. Some of the Responses also gave insight into why they play the game with responses including playing the game whenever they are bored or stressed.

With these results and figures in mind it is safe to assume that the participants have provided relevant and valid responses to the questionnaire in which we can draw precise conclusions.

4.3 Goals

Question 6 addressed whether a player thinks there is a goal to the game and what they believe it is. Most people believe that there is a goal to the game with only 2 of the 40 responses stating that there is no goal to the game. Many of the suggestions as to what the goal is included improving either their own or their friends' scores or times. Other suggestions included climbing leader boards or beating a high score. However, these responses are relative to the player, not the game. Therefore, many of the suggestions are personal goals, not goals to the game.

Through analysing the responses to this question it becomes evident that there is no clear goal to the game. If there is a goal to the game then it is not been recognised by a majority of the responses to the questionnaire. This is contrary to two of the major points in the framework stating that there should be a goal to the game and that the game should have obvious compelling goals.

However, many people do believe there is a goal to the game and the personal goals they are aiming to achieve are compelling. This suggests the perception that there is a goal to the game is enough to justify fun within the game.

Although there is no clear goal to the game, many of the responses to question 7 indicated that players felt like they were getting closer to achieving their own personal goals with 87.5% selecting 'strongly agree' or 'agree'. This suggests that it is still important for a player to feel they are getting closer to achieving a goal even if it is their own personal goal and not one common goal to the game.



Figure 4: Question 7 results

As mentioned in Chapter 2 it has been mathematically proven that it is impossible to “win” a game of Tetris. This challenged whether a player needed to be successful in a game to find it fun. Even though it is impossible to “win” Tetris, a player still needs to experience some level of success to find the game fun. This is achieved in the form of the player's own perceived goals. If a player succeeds in achieving what they consider to be their goal then they will find the game fun. Therefore, the real fun in computer games doesn't come from beating the game but beating yourself.

4.4 Challenge

Question 8 asked how challenging the participants found the game. The responses for this question were spread almost equally between ‘somewhat challenging’, ‘quite challenging’ and ‘very challenging’ with only one response selecting ‘not very challenging’. It is safe to assume that players of different skill levels provided responses to the questionnaire. For 100% of participants to be finding the game to have some degree of challenge the game successfully corresponds to the point in the framework that it should be a challenge to achieve a goal.

Question 10 asks if the game provided an appropriate level of difficulty. Of the 40 responses 35 agreed that the game provided appropriate level of difficulty. One participant strongly disagreed with the statement and stated their reason for this was because completing the fifteen levels in Marathon mode no longer provided a sufficient challenge. This shows that if the challenge is taken away from the game it no longer becomes as fun to play. This is strong evidence that challenge is an extremely important aspect of fun in computer games. On the contrary other responses stated that

despite the fact the fifteen levels could be completed, they are still satisfied with the challenge of improving their score. This further shows that there needs to be a level of challenge in the game to encourage people to continue playing the game.

4.5 Hedonic Components

Questions 15-21 within the questionnaire addressed the hedonic components within the game, asking if participants felt the game made good use of sounds, music, colour and animation and if the game included a good amount of novelty, originality, randomness and humour. These points are subjective to the player and of course a broad range of results were acquired.

However, a trend that did emerge from these questions is that a vast majority of participants selected the same answers for each question. For example, those who strongly agreed that the game made good use of sounds and music also strongly agreed with the rest of the questions. Similarly, those who disagreed and strongly disagreed did so for all the questions.

From these results I conclude that because there is such a broad range of opinions regarding the hedonic components that games should allow players to play with as many or as little of the hedonic components as possible. This could include the ability to toggle the sounds or music on or off or even change them to sounds that are desirable. Similar ideas could be applied to colour and graphics within the game to make the game ultimately desirable for the player.

4.6 Addictiveness

Question 22 asked the participants if they found themselves becoming "hooked" or "addicted" to the game. Figure 5 shows the vast amount of participants strongly agreed with this statement with no participants selecting 'disagree' or 'strongly disagree'.

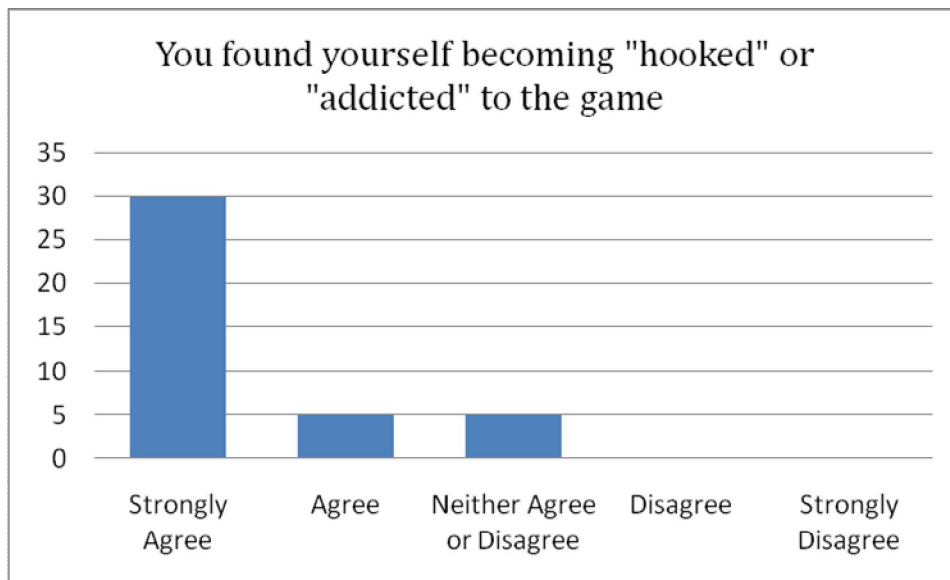


Figure 5: Question 22 results

There are many different reasons people believe the game is addictive. Many people believe the reason they become addicted to the game is the drive to better their own or their friends' scores. It appears that there is always the belief within players that they can always perform better and become determined to improve.

This means that players are no longer competing against the game but instead competing against themselves or their friends. With this as the motivation to continue playing the game it means that there is always a challenge that exists within the game and as long as there is always a challenge that exists, people will continue to play the game.

At the end of every game there is always the desire to start a new one. If a player is successful in the game, morale is high and the belief that they can further improve their score exists whereas if a player is unsuccessful they are determined to play again to improve. However, for this to exist within a game it must be simple and quick to begin a new game. With Tetris this is the case. Starting a new game is only one quick away and it begins instantly.

Addictiveness is a very important quality within computer games. If a player becomes addicted to a game they will continue to play and enjoyed the game. Fun games must be addictive.

4.7 Social Interaction

The responses from questions 23-25 strongly emphasise the effect social interaction can have on fun in computer games. Question 23 asked if social interaction added to the fun within the game. Figure 6 shows the results from this question with 85% of participants selecting 'strongly agree' or 'agree'.

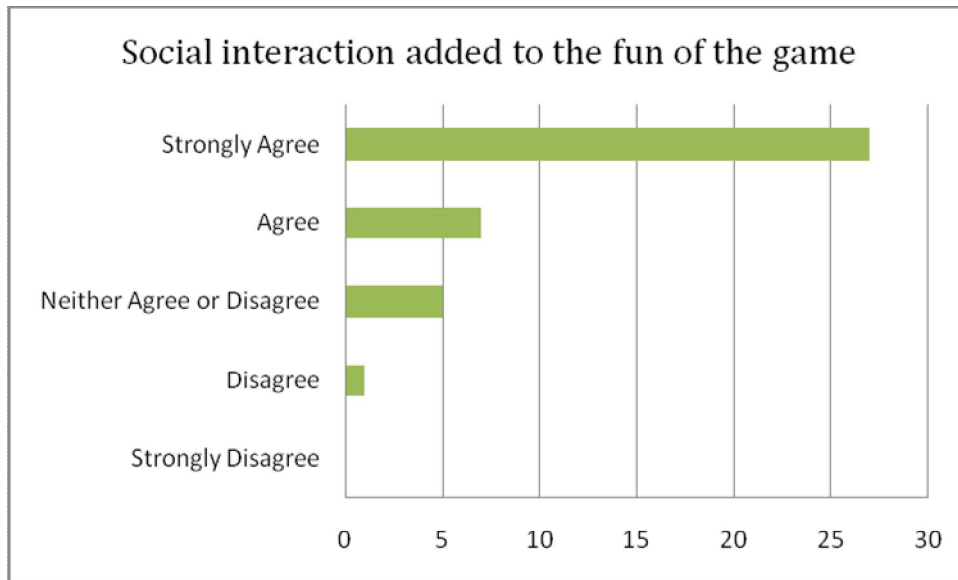


Figure 6: Question 23 results

Question 24 asked whether participants felt competitive when playing against other players. Of the 40 responses 39 selected 'yes' with one person leaving the question unanswered. Question 24.1 asked if the participants selected 'yes' to the previous question whether it added to the fun of the game. 38 of the 40 participants selected 'yes' with only one person selecting 'no'. This clearly shows that social interaction brings out competitiveness within players. This competitiveness translates to a longer amount of gameplay and added fun when achieving success.

Question 25 asked if being the best out of your friends is a key incentive to keep playing computer games. Figure 7 shows the results that the vast majority selected 'strongly agree' or 'agree' with only one person selecting 'strongly disagree'. These results strongly suggest that people will continue to play computer games for longer if there is a social interaction element within the game.

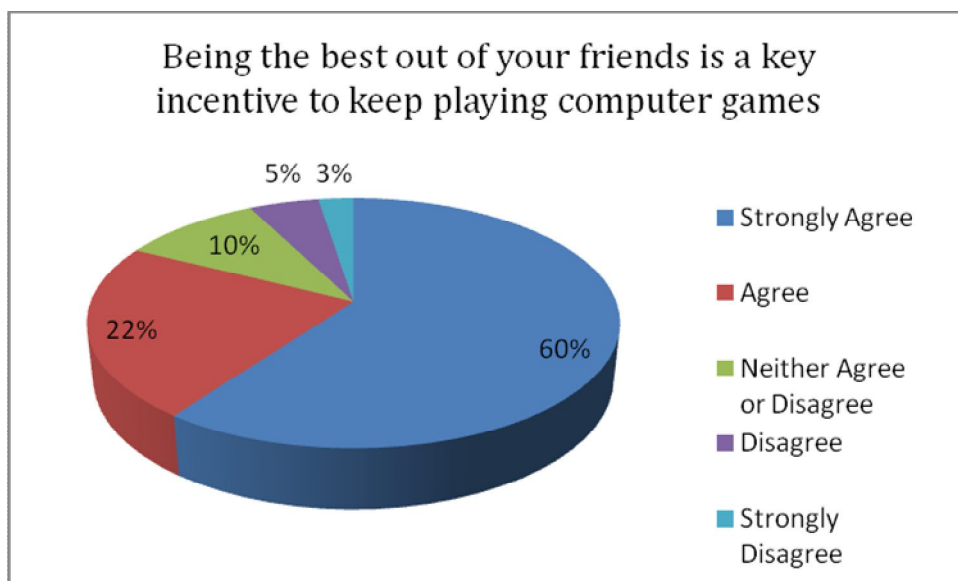


Figure 7: Question 25 results

Further evidence to support the importance over social interaction falls within question 6 which asked participants if they think there is a goal to the game and if so, what do they think it is. An overwhelming amount of people stated that the goal to the game is either to beat their friends or to reach the top of leader boards.

These questions provide overwhelming evidence that social interaction greatly contributes to fun within computer games.

4.8 Further observations

Through the responses acquired from the questionnaire, some of the reasons people play computer games has become clear. Aside from simply playing because they enjoy playing computer games, many people play either to relieve stress or boredom or simply as an alternative to what they should be doing. In these circumstances players are hoping for a quick “dose” of fun. In order to achieve this, games should be easily accessible, quick and easy to begin playing and provide fun to the player as soon as the player begins playing the game. The player should not have to wait a long time to receive a “dose” of fun.

Tetris is a game which is impossible to perfect. There is not a level where a player can claim that they are the best that they can possibly be and there is always room for improvement. As other games have a specific end point, Tetris does not. This means that a challenge always exists within the game and this challenge is compelling for players, which is a reason it is so popular. This point ultimately

strengthens the point that challenge is an important aspect concerning fun within computer games and ultimately the most fun games are those that continually provide a challenge to the player.

One of the most obvious trends within the results was the amount of participants who stated that the simplicity of Tetris, either the simple concept of the game or how easy the game is to begin playing is the key to its success. This is shown in figure 8. This is overwhelming evidence that for a computer game to be fun it must be easy to learn how to play.

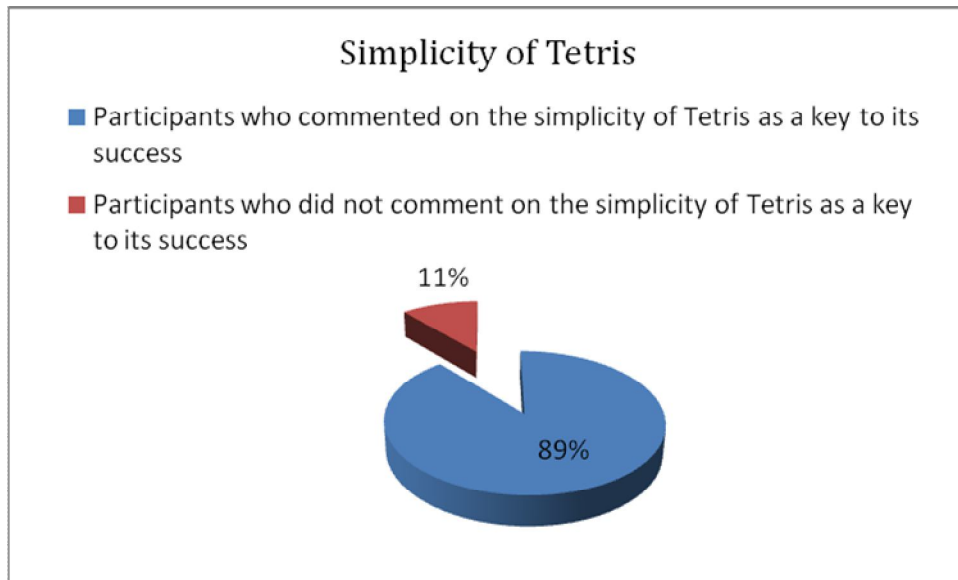


Figure 8: Simplicity in Tetris

Similarly, many people also commented on the fact Tetris is so popular is because it is simple to learn yet difficult to master. This is because the initial learning curve is not excessively steep, i.e. it is easy to continually improve when first starting to play the game but as you progress the learning curve becomes steeper and it becomes much more difficult to improve. With the initial learning curve so shallow, players enjoy the success of continual improvement and are enticed into continuing to play the game. It also means that players can continue to be challenged for a long time, for as long as they wish to play the game. Therefore, we can assume that having this principal in games significantly adds to the fun experienced by the play and greatly contributed to fun within computer games. Figure 9 shows the optimum learning curve that computer games should adopt. Adopting this learning curve into a game will maximise the amount of fun for the player over an extended period of time.

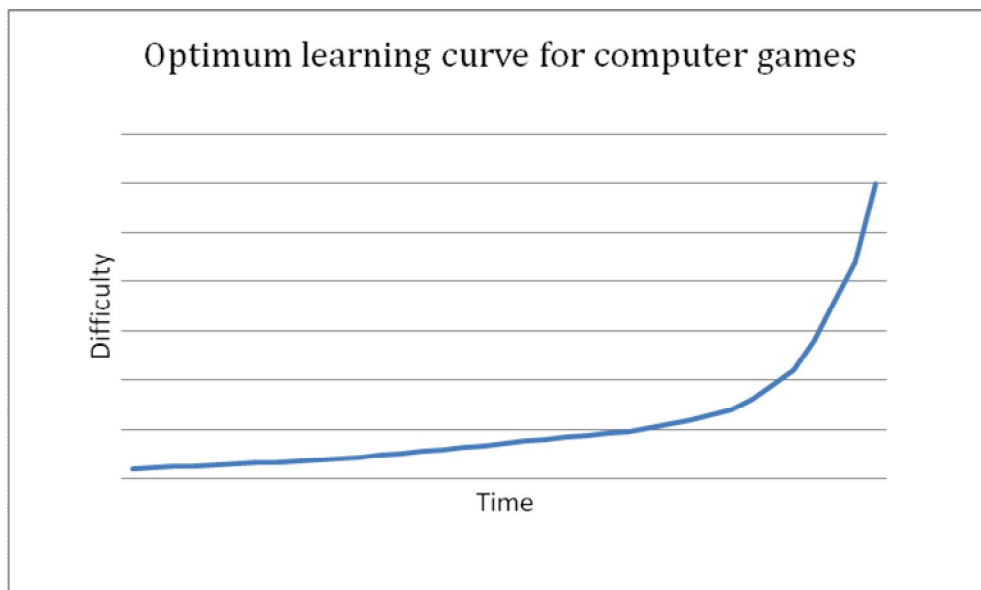


Figure 9: Optimum learning curve for computer games

Another point strongly reflected upon in the responses is that Tetris is universally appealing. It appeals to everyone regardless of age, gender or interest and is fun for all to play. Naturally a game that appeals to everyone is going to be more successful but it would be unrealistic to assume that all games could be designed to be universally appealing. Computer games will always be designed to suit specific interests. However, it is impossible to ignore that games that are universally appealing stand to be more popular and considered fun by a greater amount of people.

Many people also attributed the popularity of Tetris down to the game being “timeless”. This means that the game will never become outdated or go out of fashion or favour among players. Newer, more expensive games are continually becoming outdated and replaced where as Tetris continues to be successful in the computer game world. Again, this concept would be difficult to achieve with more modern games striving for excellence in cutting edge graphics and gameplay. However, if a game is designed in which the core components of a game do not become outdated there is chance the game could become “timeless” and consequently fun over an extended period of time.

Tetris offers a randomisation aspect to the game, a principal not seen in many games. This means that no two games are ever the same and as a result a player will never play the same game twice. Consequently a player will always play differently each time and they are able to adapt their gameplay every time they play, developing strategies and techniques to suit multiple scenarios. This causes players to think and stimulates the intelligence within a player. As a result of this concept, gameplay is never forced upon a player by the game but instead they have a choice in the way they

wish to play the game. This freedom can be very rewarding and ultimately a great amount of fun for the player. The concept of randomisation could significantly add the fun of a computer game.

Many people were also calling for greater variety within the game. Specifically, people were calling for more colour, more animation, more special features and more game modes. It appears that players want the opportunity to customise the game exactly how they wish to play it. With this in mind, games should allow players to customise the game to the way in which they wish to play it. Although many of the customisable aspects will not be consciously noticed during gameplay they will still significantly add the fun experienced by the player in the game.

Question 28 asked participants what they would do to make the game more fun. Despite the fact Tetris Friends already has a vast amount of social interaction features over 25% of responses called for a greater amount of social interaction, in particular real-time multiplayer or PvP (player versus player). This is key evidence supporting the importance of social interaction within computer games. The more opportunities for the player to engage in social interaction there are, the more fun the player will have playing the game.

4.9 Creating the final Framework for fun in computer games

The original framework (Chapter 2) contained all the relevant points concerning fun within computer games from the literature. However, after completing the data analysis phase of the project I have made many significant findings that contribute to fun within computer games. This allowed me to not only add new points to the existing framework but make current points more specific if required in order to create a final framework for fun in computer games.

A general section has been added to the framework. This section contains points that are not related to any particular section but are still significant points relating to the game. This section also addresses some of the reasons that people choose to play games as well as points that could not only contribute to the fun within the game but the success of the game.

The data analysis further allowed me to understand the points concerning goals and challenge within games. This has allowed to me strengthen these sections within the framework and thus separate them into their own respective sections. By doing this I have been able to clarify the point relating to each section. This would prove far more effective in used in a real life situation.

One of the most significant changes to the original framework is the addition of priorities for the points. The points are one of three priorities; essential, highly desirable and desirable. The essential points are the fundamental aspects that all games should include for the inclusion of fun. The highly desirable points are those that will significantly add to fun within the game but will not be seriously detrimental to the game is not included. The desirable points again contribute significantly to the fun within games and the potential success of the game but in most games would be difficult to include.

4.10 Final framework for fun in computer games

Legend:

E = Essential
 HD = Highly Desirable
 D = Desirable

Table 2: Final framework for fun in computer games

Section	Game Objectives	Priority	
General Features	• The game should be easily accessible to the player	HD	
	• It should be easy for a player to begin playing the game	HD	
	• The game should allow a player to quickly begin playing the game	HD	
	• The game should provide a “dose” of fun early in the game	E	
	• The game should be universally appealing	D	
	• The game should be timeless	D	
	• The game should include “randomization” <ul style="list-style-type: none"> ○ No two instances of the game should be the same 	HD HD	
Goals	• The game should have a simple concept	E	
	• There should a goal to the game <ul style="list-style-type: none"> ○ The game should have obvious, compelling goals 	E E	
	• Players should perceive a goal within the game	E	
	• Players should have personal goals	E	
	• The player should receive performance feedback <ul style="list-style-type: none"> ○ The player should be able to tell if they are getting closer to the goal ○ Players should feel like they are getting closer to achieving their personal goals ○ The player should always be aware of their status or score 	E E E	
	Challenge	• It should be a challenge to achieve the goal <ul style="list-style-type: none"> ○ The outcome of the goal should be uncertain <ul style="list-style-type: none"> ▪ The player should not be certain to win or lose 	E HD HD
		• The challenge in a game must not end <ul style="list-style-type: none"> ○ The game must always offer an opportunity for a player to be challenged ○ The player should be given the opportunity to continually improve/better themselves 	E E E
• Players should become “addicted” to the game		E	
• The game should adopt the optimum learning curve (see Figure 9)		E	
• Players must feel the desire at the end of a game to begin a new game		HD	
• The game should provide the opportunity to master a skill		E	
• The game should have successive layers of complexity <ul style="list-style-type: none"> ○ Variable difficulty levels 		E E	

	<ul style="list-style-type: none"> ▪ Either selected by the player ▪ Or in accordance to how well the player does ○ Multiple level goals <ul style="list-style-type: none"> ▪ Score keeping ▪ Speeded responses • The game should stimulate a players intelligence • The player should be given the opportunity to develop strategies and techniques • Gameplay should not be forced upon the player <ul style="list-style-type: none"> ○ The player should be given the choice to play the game the way they desire 	<p>HD</p> <p>HD</p> <p>E</p> <p>D</p> <p>D</p> <p>E</p> <p>HD</p> <p>HD</p> <p>HD</p>
Immersion	<ul style="list-style-type: none"> • The player should become immersed within the environment <ul style="list-style-type: none"> ○ The game should maintain the players focus throughout the game ○ The player should forget they are participating through a medium ○ The environment should not be too complicated or simple with respect to the users existing knowledge 	<p>E</p> <p>E</p> <p>E</p> <p>E</p>
Escape	<ul style="list-style-type: none"> • The game should provide the opportunity of escape to the player <ul style="list-style-type: none"> ○ The player's primary consideration should be the game in hand ○ The player should be able to forget matters in everyday life 	<p>E</p> <p>E</p> <p>HD</p>
Self-Esteem	<ul style="list-style-type: none"> • The game should engage and maintain a players self esteem <ul style="list-style-type: none"> ○ The player should be able to achieve some level of success ○ Players should be able to achieve their personal goals ○ The player should not encounter severe failure 	<p>E</p> <p>E</p> <p>E</p> <p>E</p>
Hedonic Components	<ul style="list-style-type: none"> • The game should include task-unrelated aspects such as novelty, originality, randomness and humour <ul style="list-style-type: none"> ○ The game should not be too novel or unfamiliar • The game should include satisfying sounds/music • The game should include desirable graphics/colour <ul style="list-style-type: none"> ○ The player should be able to select the extent in which these features are included in the game 	<p>HD</p> <p>E</p> <p>HD</p> <p>HD</p> <p>E</p>
Social Interaction	<ul style="list-style-type: none"> • The game should offer various opportunities for players to engage in social interaction <ul style="list-style-type: none"> ○ The game should allow players to compete with or against one another <ul style="list-style-type: none"> ▪ The player should feel a sense of competitiveness when competing against another player • The player should have incentives to compete against another player <ul style="list-style-type: none"> ○ Leader boards ○ Rewards 	<p>E</p> <p>E</p> <p>E</p> <p>E</p> <p>HD</p> <p>HD</p>

Chapter 5

Evaluation

In order to determine the success of the project I shall take into the original objectives of the project.

5.1 Achievement of project objectives

The first objective states that I should have evaluated fun within computer games. To a certain extent this covered the whole project as every aspect of the project included the evaluation of fun within computer games. The literature review allowed me to evaluate the current literature and evaluate what I felt were the most important points and compile them into a framework. The data analysis phase included a thorough evaluation of fun within computer games as I analysed the results of the questionnaire.

The second objective required me to gather and analyse data relating to a specific game. This objective was met in the experiment and data analysis phases of the project. I selected Tetris Friends as the game I was to conduct the experiment phases around. In order to collect the data I created a website which contained the questionnaire that participants were to complete in order to provide me with the data. I then analysed the data in the data analysis phase of the project. I am extremely satisfied with the way this objective was met. I was extremely pleased with the website and the program for data collection which was very effective. I was also extremely pleased with the amount of responses to the questionnaire received. These responses made the data analysis phase extremely successful and produced some interesting results.

The final objective states that I should have developed an evaluation framework for fun in computer games. This was the most significant of the objectives and what was produced was important to the project. This objective was achieved in two different ways though creating two frameworks; an initial and a final framework.

The initial framework was created upon completion of the literature review and contained all the relevant points regarding fun within computer games. I initially believed this was a very strong framework and could not foresee making any changes to it. However, on completed of the data analysis I had made many significant findings, which needed to be included into the framework. Therefore, I was able to create a final framework. This not only allowed me to add in the new findings but also strengthen some of the previous points based on the responses in the questionnaire. The final framework completed a very strong loop of the project. I am extremely satisfied with the result of the final framework and believe I have met this objective as best as I could.

5.2 Success of project

Overall I am extremely satisfied with the project and believe it has been very successful. I believe I have sufficiently met the project aims and objectives.

I am particularly pleased with the way in which I have met the objectives of the project. In particular I believe the experiment and data analysis phases were very successful. I was astonished with the response the questionnaire received. I put this down to the correct selection of game. It just shows how popular Tetris and the strength of the Tetris community really is that people would contribute so much of their time to completing the questionnaire. These results were invaluable to the data analysis and allowed me to produce very interesting results.

This in turn led to a stronger framework which I am extremely pleased with. I truly believe that if used in the correct way the framework could prove a valuable asset during the design and development of a computer game.

Chapter 6

Conclusion

6.1 Project Summary

This project was always going to be a challenge. I was investigating a relatively unexplored area and attempting to achieve what might now have been considered feasible by some.

The first part of the project was more difficult than I had expected. The literature on the subject was limited as it is such an unexplored area so I had little to go by for the original framework.

I found the experiment and data analysis phases much easier. The creation of the website posed some challenges, but I was able to overcome these. I was very happy with the quality of the website and extremely satisfied with the program for data collection allowing me to store the results of the questionnaire. Gathering the data was also far more successful than I first imagined. I was amazed with the amount of responses gained and the amount of effort and detail participants were prepared to include in their responses. It goes to show there is cause for a project of this scope and people ultimately care about the results that are produced from the project.

The responses to the questionnaire were so significant that I was able to produce a final, more specific framework. I am extremely happy with the final framework and believe it could realistically be used as a valuable aid in the computer game development process.

I have thoroughly enjoyed undertaking this project and the challenges I have faced throughout the process and overall I am extremely satisfied with what I have been able to produce.

6.2 What I have learned

Throughout the project I have gained useful insight into fun within computer games. I have also been able to shed light on some of the relatively unexplored aspects of fun within computer games, an achievement I did not anticipate at the beginning of the project.

The experiment phase of the project has allowed me to gain valuable experience in qualitative user studies. I have learned a lot about the design of questionnaires with respect to attaining the accurate information from participants.

The project has also allowed me to strengthen my technical skills, particularly in website design. I already had experience with HTML and CSS but the creation of the website still posed new technical challenges such as the questionnaire which I felt I overcame the best I could. In order to overcome

the challenge of the questionnaire I had to use PHP, a language I had very little previous experience with. Overcoming this challenge was one of the most rewarding aspects of the project and gave me great encouragement for the remainder of the project.

In addition to the insight I have gained into fun within computer games I have also furthered myself in a number of personal areas. In particular my project management skills have sharpened through the planning and organisational aspects of the project.

6.3 Future Work

Although I have developed a framework for fun in computer games, it is still unclear the effect it would have if used in conjunction with the development of a computer game. This is the next step as far as assessing the framework is concerned. There are various ways in which this could be achieved.

Realistically to incorporate the points of the framework into a new computer game, the framework would have to be consulted during the design phase of the creation of the game. The relationship between the designers and the framework could work two ways. Firstly the designer could cross reference each new idea that is incorporated into the design of the game against the framework in order to identify if it is an effective idea. The framework could also provide useful ideas to computer game designers as to what points could be included in the game in order to make it more fun for players.

Another way the effectiveness of the framework could be analysed could be through the modification of an existing game. This could include any amount of modification including small changes such as adding various features to the game or large changes such as changing the gameplay completely. It could also include adding the opportunity for social interaction.

Ultimately the most effective way to test the effectiveness of the framework would be to use it in a practical scenario such as the above. However, designing a new game according to the framework could provide significant risk to those adopting the framework as a lot of time and resources would be required to be invested in the process. Modifying an existing game would not require as substantial risk as designing a new game because if the changes are unsuccessful there is always the option of making the changes back to the previous, well established version of the game.

Using the framework in a practical situation would not be beneficial to the game but to the framework also. When tested, the success of the game could be assessed and the points in the framework refined in a trial and error format until the framework is as strong possible.

Chapter 7

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Chapter 8

Appendices

8.1 Website Screenshots

8.1.1 Homepage



The screenshot shows the homepage of a website titled "STUART LITTLE" with the subtitle "a study of fun in computer games". The page features a navigation menu with links for "Home", "Questionnaire", "Project", and "Contact". The main content area includes a "Welcome" section with a dotted line, a thank-you message, a paragraph about the author's background and project, a paragraph about the study's focus on Tetris, a request to use the questionnaire link, and a sign-off. On the right side, there is a Tetris game board with a grid and several pieces. The footer contains the copyright notice "© Stuart Little, ALL RIGHTS RESERVED.".

STUART LITTLE
a study of fun in computer games

[Home](#) [Questionnaire](#) [Project](#) [Contact](#)

Welcome

Thank you for visiting my site.

I am a final year Information Systems Undergraduate at the School of Computing Science at Newcastle University conducting my final year project on 'A study of fun in computer games'.

As part of my study I am focusing in particular on one game; in this case Tetris. The purpose of this site is to get those who have played Tetris to complete a questionnaire in order to gain insight into what makes games fun and how computer games designers can incorporate fun into their computer games as they are produced.

Please use the link above to access the questionnaire. I will take no longer than 5 minutes to complete.

Many Thanks.
Stuart.

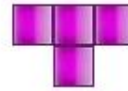
© Stuart Little, ALL RIGHTS RESERVED.

8.1.2 Questionnaire Page

STUARTLITTLE

a study of fun in computer games

[Home](#) [Questionnaire](#) [Project](#) [Contact](#)



Questionnaire

Thank you for taking the time to fill in my questionnaire. It should take no longer than 5 minutes to complete.

All data collected through this questionnaire is completely anonymous. It will be analysed for the purpose of this project only. No personal data will appear in the analysis and it will not be in the public domain. I shall be the only person with access to this data.

1. On average, how often do you play the game?

Everyday ▾

2. How much experience do you have with Tetris?

3. How much fun do you find the game?

Extremely good fun ▾

4. Will you play the game again and if so, how often?

5. What do you think are the most fun aspects of the game?

6. Do you think there is a goal to the game and if so, what do you think it is?

7. Whilst playing you felt like you were getting closer to achieving the goal

Strongly Agree ▼

8. How challenging did you find the game?

Very challenging ▼

9. The game provided the opportunity to master a skill

Strongly Agree ▼

10. The game provided appropriate levels of difficulty

Strongly Agree ▼

10.1 If you selected disagree or strongly disagree, please explain why

11. You were always able to tell how well you were doing whilst playing

Strongly Agree ▼

12. The game maintained your full attention whilst playing

Strongly Agree ▼

13. It was easy to learn how to play the game

Strongly Agree ▼

14. How successful were you in the game?

15. The game made good use of sounds and music

Strongly Agree ▼

16. The game made good use of colour

Strongly Agree ▼

17. The game made good use of animation

Strongly Agree ▼

18. The game included a good amount of novelty

Strongly Agree ▼

18. The game included a good amount of novelty

19. The game included a good amount of originality

20. The game included a good amount of randomness

21. The game included a good amount of humour

22. You found yourself becoming "hooked" or "addicted" to the game

22.1 Please explain why you think this was

23. Social interaction (competing against other players) added to the fun of the game

24. Do you feel competitive when playing against other players? Yes No

24.1 If yes, do you think this added to the fun of the game? Yes No

25. Being the best out of your friends is a key incentive to keep playing computer games

26. Why do you think Tetris is such a popular game?

27. What do you think makes computer games fun?

28. What would you do to make the game more fun?

Submit

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8.1.3 Submitted Questionnaire Page

STUARTLITTLE

a study of fun in computer games

Home **Questionnaire** Project Contact



Questionnaire Submitted

Your answers have been submitted successfully. Thank you for taking the time to fill out my questionnaire.

Your answers are below:

- | | |
|---|---------------------------|
| 1. On average, how often do you play the game? | Everyday |
| 2. How much experience do you have with Tetris? | This is an example answer |
| 3. How much fun do you find the game? | Extremely good fun |
| 4. Will you play the game again and if so, how often? | This is an example answer |
| 5. What do you think are the most fun aspects of the game? | This is an example answer |
| 6. Do you think there is a goal to the game and if so, what do you think it is? | This is an example answer |
| 7. Whilst playing you felt like you were getting closer to achieving the goal | Strongly Agree |
| 8. How challenging did you find the game? | Very challenging |
| 9. The game provided the opportunity to master a skill | Strongly Agree |
| 10. The game provided appropriate levels of difficulty | Strongly Agree |
| 10.1 If you selected disagree or strongly disagree, please explain why | This is an example answer |
| 11. You were always able to tell how well you were doing whilst playing | Strongly Agree |
| 12. The game maintained your full attention whilst playing | Strongly Agree |
| 13. It was easy to learn how to play the game | Strongly Agree |
| 14. How successful were you in the game? | This is an example answer |

15. The game made good use of sounds and music	Strongly Agree
16. The game made good use of colour	Strongly Agree
17. The game made good use of animation	Strongly Agree
18. The game included a good amount of novelty	Strongly Agree
19. The game included a good amount of originality	Strongly Agree
20. The game included a good amount of randomness	Strongly Agree
21. The game included a good amount of humour	Strongly Agree
22. You found yourself becoming "hooked" or "addicted" to the game	Strongly Agree
22.1 Please explain why you think this was	This is an example answer
23. Social interaction (competing against other players) added to the fun of the game	Strongly Agree
24. Do you feel competitive when playing against other players?	No
24.1 If yes, do you think this added to the fun of the game?	No
25. Being the best out of your friends is a key incentive to keep playing computer games	Strongly Agree
26. Why do you think Tetris is such a popular game?	This is an example answer
27. What do you think makes computer games fun?	This is an example answer
28. What would you do to make the game more fun?	This is an example answer

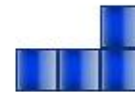
© Stuart Little, ALL RIGHTS RESERVED.

8.1.4 Project Page

STUARTLITTLE

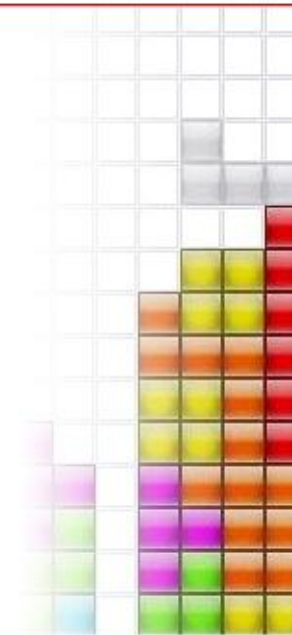
a study of fun in computer games

[Home](#) [Questionnaire](#) **[Project](#)** [Contact](#)



Stay Tuned

You will be able to view my completed project/dissertation here on 08/05/2009.



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8.1.5 Contact Page

STUARTLITTLE

a study of fun in computer games



[Home](#) [Questionnaire](#) [Project](#) **[Contact](#)**

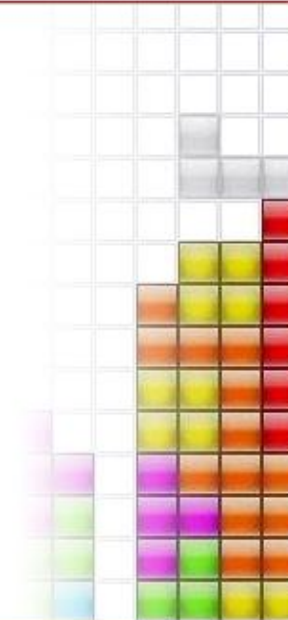
Contact Me

If you have any comments or questions regarding the content of this site please do not hesitate to contact me and I will get back to you as soon as possible.

Name:

E-mail:

Comment:



© Stuart Little, ALL RIGHTS RESERVED.

8.1.6 Submitted Contact Page

STUARTLITTLE
a study of fun in computer games

Home Questionnaire Project **Contact**

Thank you

Your comments have been submitted successfully. I will get back to you shortly.



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The image shows a screenshot of a website's contact page. At the top left is the logo 'STUARTLITTLE' in red and black, with the tagline 'a study of fun in computer games' below it. To the right of the logo are three Tetris pieces: a purple T-tetromino, the 'TETRIS' logo in yellow and blue, and a blue L-tetromino. Below the logo is a navigation menu with links for 'Home', 'Questionnaire', 'Project', and 'Contact', where 'Contact' is underlined in red. The main content area has a white background with a red border. It contains the text 'Thank you' followed by a dotted line, and a message stating 'Your comments have been submitted successfully. I will get back to you shortly.' To the right of this text is a Tetris game board with a grid of 10 columns and 20 rows. The board shows a partially completed structure of colored blocks (purple, green, blue, yellow, orange, red, grey) on the right side. At the bottom of the page is a red footer bar with the text '© Stuart Little. ALL RIGHTS RESERVED.'

8.2 Website source code listing

8.2.1 index.html

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"
"http://www.w3.org/TR/html4/strict.dtd">
<html>
<head>

<title>Stuart Little - A study of fun in computer games</title>

<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<style type="text/css">

* { padding: 0; margin: 0; }

h1 {font-family: Verdana, sans-serif; color: #262626; font-size:
12px;}
h2 {font-family: Verdana, sans-serif; color: #A1A1A1; font-size:
9px; font-style: italic}
p {font-family: Verdana, sans-serif; color: #636363; font-size:
11px;}

body {
text-align: center;
background: #fff;

}
#wrapper {
margin-left:auto; margin-right:auto;
width: 732px;
}
img#header {
display: block;
/*border: 1px solid #ccc;*/
margin-top: 10px;
}
#navigation {
width: 732px;
margin: 0px 0px 0px 0px;

}

#navcontainer
{
margin: 0;
padding: 0;
height: 22px;
font: 11px Verdana, sans-serif;
width: 100%;
border-bottom: 1px solid #cd0000;
list-style-type: none;

}

```

```
/*Navigation based on code publically available from
http://css.maxdesign.com.au/listamatic/horizontal28.htm*/
#navlist li
{
float: left;
margin: 0;
padding: 0;
width: auto;
display: block;
}

#navlist li a, #navlist li a:link
{
color: #555;
text-decoration: none;
padding: 3px 5px 3px 5px;
display: block;
}

#navlist li a:hover
{
color: #cd0000;
border-bottom: 3px solid #cd0000;
cursor: pointer;
background: #eee;
}

#navlist li a#current, #navlist li a#current:link
{
color: #000;
cursor: default;
font-weight: bold;
border-bottom: 3px solid #cd0000;
}

#navlist li a#current:hover
{
border-bottom: 3px solid #cd0000;
background: #b2b1b1;
}

#content {
text-align: left;
width: 730px;
border: 1px solid #ccc;
margin: 0px 0px 0px 0px;
height: 321px;
}

#footer {
text-align:center;
width: 732px;
background: #cd0000;
margin: 0px 0px 0px 0px;
height:15px;
}
```

```

</style>
</head>

<body>

    <!-- Wrapper -->
    <div id="wrapper">

        <!-- Header -->
        <div id="header">
            
        </div>
        <!-- End Header -->

        <!-- Navigation -->
        <!--Navigation based on code publically available from
http://css.maxdesign.com.au/listamatic/horizontal28.htm-->
        <div id="navigation">
            <div id="navcontainer">
                <ul id="navlist">
                    <li id="active"><a href="#"
id="current">Home</a></li>
                    <li><a href="questions.html">Questionnaire</a></li>
                    <li><a href="project.html">Project</a></li>
                    <li><a href="contact.html">Contact</a></li>
                </ul>
            </div>
        </div>
        <!-- End Navigation -->

        <!-- Content -->
        <div id="content">
            
            <div style="padding: 20px;">
                <h1>
                    Welcome
                </h1>
                <h2 style="border-bottom: 1px dashed #000000; width:
300px;">
                </h2>
                <br>
                <p>
                    Thank you for visiting my site.
                </p>
                <br>
                <p>
                    I am a final year Information Systems
                    Undergraduate at the School of Computing Science at Newcastle
                    University conducting my final year project on 'A study of fun in
                    computer games'.
                <br>
                <br>
                    As part of my study I am focusing in particular on
                    one game; in this case Tetris. The purpose of this site is to get

```

those who have played Tetris to complete a questionnaire in order to gain insight into what makes games fun and how computer games designers can incorporate fun into their computer games as they are produced.

Please use the link above to access the questionnaire. I will take no longer than 5 minutes to complete.

Many Thanks.

Stuart.

</p>

</div>

</div>

<!-- Footer -->

<div id="footer">

<p>

© Stuart Little. ALL RIGHTS RESERVED.

</p>

</div>

<!-- End Content -->

</div>

<!-- End Wrapper -->

</body>

</html>

8.2.2 questions.html

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"
"http://www.w3.org/TR/html4/strict.dtd">
<html>
<head>

<title>Stuart Little - A study of fun in computer games</title>

<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<style type="text/css">

* { padding: 0; margin: 0; }

h1 {font-family: Verdana, sans-serif; color: #262626; font-size:
12px;}
h2 {font-family: Verdana, sans-serif; color: #A1A1A1; font-size:
9px; font-style: italic}
p {font-family: Verdana, sans-serif; color: #636363; font-size:
11px;}

body {
text-align: center;
background: #fff;

}
#wrapper {
margin-left:auto; margin-right:auto;
width: 732px;
}
img#header {
display: block;
/*border: 1px solid #ccc;*/
margin-top: 10px;
}
#navigation {
width: 732px;
margin: 0px 0px 0px 0px;

}

#navcontainer
{
margin: 0;
padding: 0;
height: 22px;
font: 11px Verdana, sans-serif;
width: 100%;
border-bottom: 1px solid #cd0000;
list-style-type: none;

}

#navlist li
```

```
{
float: left;
margin: 0;
padding: 0;
width: auto;
display: block;
}

#navlist li a, #navlist li a:link
{
color: #555;
text-decoration: none;
padding: 3px 5px 3px 5px;
display: block;
}

#navlist li a:hover
{
color: #cd0000;
border-bottom: 3px solid #cd0000;
cursor: pointer;
background: #eee;
}

#navlist li a#current, #navlist li a#current:link
{
color: #000;
cursor: default;
font-weight: bold;
border-bottom: 3px solid #cd0000;
}

#navlist li a#current:hover
{
border-bottom: 3px solid #cd0000;
background: #b2b1b1;
}

#content {
text-align: left;
width: 730px;
border: 1px solid #ccc;
margin: 0px 0px 0px 0px;
height: 100%;
}

#footer {
text-align:center;
width: 732px;
background: #cd0000;
margin: 0px 0px 0px 0px;
height:15px;
}

</style>
```

```

</head>
<body>

    <!-- Wrapper -->
    <div id="wrapper">

        <!-- Header -->
        <div id="header">
            
        </div>
        <!-- End Header -->

        <!-- Navigation -->
        <div id="navigation">
            <div id="navcontainer">
                <ul id="navlist">
                    <li><a href="index.html">Home</a></li>
                    <li id="active"><a href="#"
id="current">Questionnaire</a></li>
                    <li><a href="project.html">Project</a></li>
                    <li><a href="contact.html">Contact</a></li>
                </ul>
            </div>
        </div>
        <!-- End Navigation -->

        <!-- Content -->
        <div id="content">
            <!--
            <div style="padding: 20px;">
                <h1>
                    Questionnaire
                </h1>
                <h2 style="border-bottom: 1px dashed #000000; width:
300px;">
                </h2>
                <br>
                <p>
                    Thank you for taking the time to fill in my
questionnaire. It should take no longer than 5 minutes to complete.
                <br>
                <br>
                <b>
                    All data collected through this questionnaire
is completely anonymous. It will be analysed for the purpose of this
project only. No personal data will appear in the analysis and it
will not be in the public domain. I shall be the only person with
access to this data.
                </b>
                </p>
                <br>

            <form name="questionnaire" action="results.php" method="post">

            <table border=0 cellspacing=5 cellpadding=0>

```

```

<!-- Question 1 -->
<tr><td>
<p>
1. On average, how often do you play the game?
</p>
<td>
<p>
<select name="q1">
  <option value="Everyday">Everyday</option>
  <option value="Everyday other day">Everyday other day</option>
  <option value="Once a week">Once a week</option>
  <option value="Once a month">Once a month</option>
</select>
</p>
<!-- Question 2 -->
<tr><td>
<p>
2. How much experience do you have with Tetris?
</p>
<td>
<textarea name="q2" cols="40" rows="5">
</textarea>
<!-- Question 3 -->
<tr><td>
<p>
3. How much fun do you find the game?
</p>
<td>
<select name="q3">
  <option value="Extremely good fun">Extremely good fun</option>
  <option value="Good fun">Good fun</option>
  <option value="Average amount of fun">Average amount of
fun</option>
  <option value="Not much fun">Not much fun</option>
  <option value="Not fun at all">Not fun at all</option>
</select>
<!-- Question 4 -->
<tr><td>
<p>
4. Will you play the game again and if so, how often?
<p>
<td>
<textarea name="q4" cols="40" rows="5">
</textarea>
<!-- Question 5 -->
<tr><td>
<p>
5. What do you think are the most fun aspects of the game?
</p>
<td>
<textarea name="q5" cols="40" rows="5">
</textarea>
<!-- Question 6 -->
<tr><td>
<p>

```

```

6. Do you think there is a goal to the game and if so, what do you
think it is?
</p>
<td>
<textarea name="q6" cols="40" rows="5">
</textarea>
<!-- Question 7 -->
<tr><td>
<p>
7. Whilst playing you felt like you were getting closer to achieving
the goal
</p>
<td>
<select name="q7">
  <option value="Strongly Agree">Strongly Agree</option>
  <option value="Agree">Agree</option>
  <option value="Neither Agree or Disagree">Neither Agree or
Disagree</option>
  <option value="Disagree">Disagree</option>
  <option value="Strongly Disagree">Strongly Disagree</option>
</select>
<!-- Question 8 -->
<tr><td>
<p>
8. How challenging did you find the game?
</p>
<td>
<select name="q8">
  <option value="Very challenging">Very challenging</option>
  <option value="Quite challenging">Quite challenging</option>
  <option value="Somewhat challenging">Somewhat
challenging</option>
  <option value="Not very challenging">Not very
challenging</option>
  <option value="Not challenging at all">Not challenging at
all</option>
</select>
<!-- Question 9 -->
<tr><td>
<p>
9. The game provided the opportunity to master a skill
</p>
<td>
<select name="q9">
  <option value="Strongly Agree">Strongly Agree</option>
  <option value="Agree">Agree</option>
  <option value="Neither Agree or Disagree">Neither Agree or
Disagree</option>
  <option value="Disagree">Disagree</option>
  <option value="Strongly Disagree">Strongly Disagree</option>
</select>
<!-- Question 10 -->
<tr><td>
<p>
10. The game provided appropriate levels of difficulty
</p>

```

```

<td>
<select name="q10">
  <option value="Strongly Agree">Strongly Agree</option>
  <option value="Agree">Agree</option>
  <option value="Neither Agree or Disagree">Neither Agree or
Disagree</option>
  <option value="Disagree">Disagree</option>
  <option value="Strongly Disagree">Strongly Disagree</option>
</select>
<!-- Question 10.1 -->
<tr><td>
<p>
10.1 If you selected disagree or strongly disagree, please explain
why
</p>
<td>
<textarea name="q101" cols="40" rows="5">
</textarea>
<!-- Question 11 -->
<tr><td>
<p>
11. You were always able to tell how well you were doing whilst
playing
</p>
<td>
<select name="q11">
  <option value="Strongly Agree">Strongly Agree</option>
  <option value="Agree">Agree</option>
  <option value="Neither Agree or Disagree">Neither Agree or
Disagree</option>
  <option value="Disagree">Disagree</option>
  <option value="Strongly Disagree">Strongly Disagree</option>
</select>
<!-- Question 12 -->
<tr><td>
<p>
12. The game maintained your full attention whilst playing
</p>
<td>
<select name="q12">
  <option value="Strongly Agree">Strongly Agree</option>
  <option value="Agree">Agree</option>
  <option value="Neither Agree or Disagree">Neither Agree or
Disagree</option>
  <option value="Disagree">Disagree</option>
  <option value="Strongly Disagree">Strongly Disagree</option>
</select>
<!-- Question 13 -->
<tr><td>
<p>
13. It was easy to learn how to play the game
</p>
<td>
<select name="q13">
  <option value="Strongly Agree">Strongly Agree</option>
  <option value="Agree">Agree</option>

```

```

    <option value="Neither Agree or Disagree">Neither Agree or
Disagree</option>
    <option value="Disagree">Disagree</option>
    <option value="Strongly Disagree">Strongly Disagree</option>
</select>
<!-- Question 14 -->
<tr><td>
<p>
14. How successful were you in the game?
</p>
<td>
<textarea name="q14" cols="40" rows="5">
</textarea>
<!-- Question 15 -->
<tr><td>
<p>
15. The game made good use of sounds and music
</p>
<td>
<select name="q15">
    <option value="Strongly Agree">Strongly Agree</option>
    <option value="Agree">Agree</option>
    <option value="Neither Agree or Disagree">Neither Agree or
Disagree</option>
    <option value="Disagree">Disagree</option>
    <option value="Strongly Disagree">Strongly Disagree</option>
</select>
<!-- Question 16 -->
<tr><td>
<p>
16. The game made good use of colour
</p>
<td>
<select name="q16">
    <option value="Strongly Agree">Strongly Agree</option>
    <option value="Agree">Agree</option>
    <option value="Neither Agree or Disagree">Neither Agree or
Disagree</option>
    <option value="Disagree">Disagree</option>
    <option value="Strongly Disagree">Strongly Disagree</option>
</select>
<!-- Question 17 -->
<tr><td>
<p>
17. The game made good use of animation
</p>
<td>
<select name="q17">
    <option value="Strongly Agree">Strongly Agree</option>
    <option value="Agree">Agree</option>
    <option value="Neither Agree or Disagree">Neither Agree or
Disagree</option>
    <option value="Disagree">Disagree</option>
    <option value="Strongly Disagree">Strongly Disagree</option>
</select>
<!-- Question 18 -->

```

```
<tr><td>
<p>
18. The game included a good amount of novelty
</p>
<td>
<select name="q18">
  <option value="Strongly Agree">Strongly Agree</option>
  <option value="Agree">Agree</option>
  <option value="Neither Agree or Disagree">Neither Agree or
Disagree</option>
  <option value="Disagree">Disagree</option>
  <option value="Strongly Disagree">Strongly Disagree</option>
</select>
<!-- Question 19 -->
<tr><td>
<p>
19. The game included a good amount of originality
</p>
<td>
<select name="q19">
  <option value="Strongly Agree">Strongly Agree</option>
  <option value="Agree">Agree</option>
  <option value="Neither Agree or Disagree">Neither Agree or
Disagree</option>
  <option value="Disagree">Disagree</option>
  <option value="Strongly Disagree">Strongly Disagree</option>
</select>
<!-- Question 20 -->
<tr><td>
<p>
20. The game included a good amount of randomness
</p>
<td>
<select name="q20">
  <option value="Strongly Agree">Strongly Agree</option>
  <option value="Agree">Agree</option>
  <option value="Neither Agree or Disagree">Neither Agree or
Disagree</option>
  <option value="Disagree">Disagree</option>
  <option value="Strongly Disagree">Strongly Disagree</option>
</select>
<!-- Question 21 -->
<tr><td>
<p>
21. The game included a good amount of humour
</p>
<td>
<select name="q21">
  <option value="Strongly Agree">Strongly Agree</option>
  <option value="Agree">Agree</option>
  <option value="Neither Agree or Disagree">Neither Agree or
Disagree</option>
  <option value="Disagree">Disagree</option>
  <option value="Strongly Disagree">Strongly Disagree</option>
</select>
<!-- Question 22 -->
```

```

<tr><td>
<p>
22. You found yourself becoming &quot;hooked&quot; or
&quot;addicted&quot; to the game
</p>
<td>
<select name="q22">
  <option value="Strongly Agree">Strongly Agree</option>
  <option value="Agree">Agree</option>
  <option value="Neither Agree or Disagree">Neither Agree or
Disagree</option>
  <option value="Disagree">Disagree</option>
  <option value="Strongly Disagree">Strongly Disagree</option>
</select>
<!-- Question 22.1 -->
<tr><td>
<p>
22.1 Please explain why you think this was
</p>
<td>
<textarea name="q221" cols="40" rows="5">
</textarea>
<!-- Question 23 -->
<tr><td>
<p>
23. Social interaction (competing against other players) added to
the fun of the game
</p>
<td>
<select name="q23">
  <option value="Strongly Agree">Strongly Agree</option>
  <option value="Agree">Agree</option>
  <option value="Neither Agree or Disagree">Neither Agree or
Disagree</option>
  <option value="Disagree">Disagree</option>
  <option value="Strongly Disagree">Strongly Disagree</option>
</select>
<!-- Question 24 -->
<tr><td>
<p>
24. Do you feel competitive when playing against other players?
</p>
<td>
<input type="radio" name="q24" value="Yes"> Yes
<input type="radio" name="q24" value="No"> No
<!-- Question 24.1 -->
<tr><td>
<p>
24.1 If yes, do you think this added to the fun of the game?
</p>
<td>
<input type="radio" name="q241" value="Yes"> Yes
<input type="radio" name="q241" value="No"> No
<!-- Question 25 -->
<tr><td>
<p>

```

25. Being the best out of your friends is a key incentive to keep playing computer games

```
</p>
<td>
<select name="q25">
  <option value="Strongly Agree">Strongly Agree</option>
  <option value="Agree">Agree</option>
  <option value="Neither Agree or Disagree">Neither Agree or
Disagree</option>
  <option value="Disagree">Disagree</option>
  <option value="Strongly Disagree">Strongly Disagree</option>
</select>
```

```
<!-- Question 26 -->
```

```
<tr><td>
<p>
26. Why do you think Tetris is such a popular game?
```

```
</p>
<td>
<textarea name="q26" cols="40" rows="5">
</textarea>
```

```
<!-- Question 27 -->
```

```
<tr><td>
<p>
27. What do you think makes computer games fun?
```

```
</p>
<td>
<textarea name="q27" cols="40" rows="5">
</textarea>
```

```
<!-- Question 28 -->
```

```
<tr><td>
<p>
28. What would you do to make the game more fun?
```

```
</p>
<td>
<textarea name="q28" cols="40" rows="5">
</textarea>
```

```
<tr><td>
<input type="submit" value="Submit">
```

```
</table>
```

```
</form>
```

```
  </div>
```

```
  </div>
```

```
<!-- Footer -->
```

```
  <div id="footer">
```

```
    <p>
```

```
      &copy; Stuart Little.  ALL RIGHTS RESERVED.
```

```
    </p>
```

```
  </div>
```

```
<!-- End Content -->
```

```
</div>
```

```
<!-- End Wrapper -->
```

```
</body>
```

```
</html>
```

8.2.3 results.php

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"
"http://www.w3.org/TR/html4/strict.dtd">
<html>
<head>

<title>Stuart Little - A study of fun in computer games</title>

<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<style type="text/css">

* { padding: 0; margin: 0; }

h1 {font-family: Verdana, sans-serif; color: #262626; font-size:
12px;}
h2 {font-family: Verdana, sans-serif; color: #A1A1A1; font-size:
9px; font-style: italic}
p {font-family: Verdana, sans-serif; color: #636363; font-size:
11px;}

body {
text-align: center;
background: #fff;

}
#wrapper {
margin-left:auto; margin-right:auto;
width: 732px;
}
img#header {
display: block;
/*border: 1px solid #ccc;*/
margin-top: 10px;
}
#navigation {
width: 732px;
margin: 0px 0px 0px 0px;

}

#navcontainer
{
margin: 0;
padding: 0;
height: 22px;
font: 11px Verdana, sans-serif;
width: 100%;
border-bottom: 1px solid #cd0000;
list-style-type: none;

}

#navlist li
{
```

```
float: left;
margin: 0;
padding: 0;
width: auto;
display: block;
}

#navlist li a, #navlist li a:link
{
color: #555;
text-decoration: none;
padding: 3px 5px 3px 5px;
display: block;
}

#navlist li a:hover
{
color: #cd0000;
border-bottom: 3px solid #cd0000;
cursor: pointer;
background: #eee;
}

#navlist li a#current, #navlist li a#current:link
{
color: #000;
cursor: default;
font-weight: bold;
border-bottom: 3px solid #cd0000;
}

#navlist li a#current:hover
{
border-bottom: 3px solid #cd0000;
background: #b2b1b1;
}

#content {
text-align: left;
width: 730px;
border: 1px solid #ccc;
margin: 0px 0px 0px 0px;
height: 100%;
}

#footer {
text-align:center;
width: 732px;
background: #cd0000;
margin: 0px 0px 0px 0px;
height:15px;
}

</style>
</head>
```

```

<body>

<?php

$filename = "output.txt"; //must CHMOD to 666

$fp = fopen ($filename, "a");
if ($fp) {
fwrite ($fp, date("F j, Y, g:i a") . "||" . $_POST['q1'] . "||" .
$_POST['q2'] . "||" . $_POST['q3'] . "||" . $_POST['q4'] . "||" .
$_POST['q5'] . "||" . $_POST['q6'] . "||" . $_POST['q7'] . "||" .
$_POST['q8'] . "||" . $_POST['q9'] . "||" . $_POST['q10'] . "||" .
$_POST['q101'] . "||" . $_POST['q11'] . "||" . $_POST['q12'] . "||" .
. $_POST['q13'] . "||" . $_POST['q14'] . "||" . $_POST['q15'] . "||" .
. $_POST['q16'] . "||" . $_POST['q17'] . "||" . $_POST['q18'] . "||" .
. $_POST['q19'] . "||" . $_POST['q20'] . "||" . $_POST['q21'] . "||" .
. $_POST['q22'] . "||" . $_POST['q221'] . "||" . $_POST['q23'] .
"||" . $_POST['q24'] . "||" . $_POST['q241'] . "||" . $_POST['q25']
. "||" . $_POST['q26'] . "||" . $_POST['q27'] . "||" . $_POST['q28']
. "||" . "\r\n");
fclose ($fp);
echo ("File written");
}
else {
echo ("File was not written");
}

$q1 = $_POST['q1'];
$q2 = $_POST['q2'];
$q3 = $_POST['q3'];
$q4 = $_POST['q4'];
$q5 = $_POST['q5'];
$q6 = $_POST['q6'];
$q7 = $_POST['q7'];
$q8 = $_POST['q8'];
$q9 = $_POST['q9'];
$q10 = $_POST['q10'];
$q101 = $_POST['q101'];
$q11 = $_POST['q11'];
$q12 = $_POST['q12'];
$q13 = $_POST['q13'];
$q14 = $_POST['q14'];
$q15 = $_POST['q15'];
$q16 = $_POST['q16'];
$q17 = $_POST['q17'];
$q18 = $_POST['q18'];
$q19 = $_POST['q19'];
$q20 = $_POST['q20'];
$q21 = $_POST['q21'];
$q22 = $_POST['q22'];
$q221 = $_POST['q221'];
$q23 = $_POST['q23'];
$q24 = $_POST['q24'];
$q241 = $_POST['q241'];
$q25 = $_POST['q25'];
$q26 = $_POST['q26'];

```

```

$q27 = $_POST['q27'];
$q28 = $_POST['q28'];

?>

<!-- Wrapper -->
<div id="wrapper">

<!-- Header -->
<div id="header">

</div>
<!-- End Header -->

<!-- Navigation -->
<div id="navigation">
<div id="navcontainer">
<ul id="navlist">
<li><a href="index.html">Home</a></li>
<li id="active"><a href="questions.html"
id="current">Questionnaire</a></li>
<li><a href="project.html">Project</a></li>
<li><a href="contact.html">Contact</a></li>
</ul>
</div>
</div>
<!-- End Navigation -->

<!-- Content -->
<div id="content">
<!---->
<div style="padding: 20px;">
<h1>
Questionnaire Submitted
</h1>
<h2 style="border-bottom: 1px dashed #000000; width:
300px;">
</h2>
<br>
<p>
Your answers have been submitted successfully.
Thank you for taking the time to fill out my questionnaire.
</p>
<br>
<p>
Your answers are below:
</p>
<br>
<table border=0 cellspacing=5 cellpadding=0>
<tr>
<td><p>1. On average, how often do you play the game?</p></td>
<td><p><?=$q1?></p></td>
</tr>
<tr>
<td><p>2. How much experience do you have with Tetris?</p></td>

```

```

    <td><p><?=$q2?></p></td>
</tr>
<tr>
    <td><p>3. How much fun do you find the game?</p></td>
    <td><p><?=$q3?></p></td>
</tr>
<tr>
    <td><p>4. Will you play the game again and if so, how
often?</p></td>
    <td><p><?=$q4?></p></td>
</tr>
<tr>
    <td><p>5. What do you think are the most fun aspects of the
game?</p></td>
    <td><p><?=$q5?></p></td>
</tr>
<tr>
    <td><p>6. Do you think there is a goal to the game and if so,
what do you think it is?</p></td>
    <td><p><?=$q6?></p></td>
</tr>
<tr>
    <td><p>7. Whilst playing you felt like you were getting closer
to achieving the goal</p></td>
    <td><p><?=$q7?></p></td>
</tr>
<tr>
    <td><p>8. How challenging did you find the game?</p></td>
    <td><p><?=$q8?></p></td>
</tr>
<tr>
    <td><p>9. The game provided the opportunity to master a
skill</p></td>
    <td><p><?=$q9?></p></td>
</tr>
<tr>
    <td><p>10. The game provided appropriate levels of
difficulty</p></td>
    <td><p><?=$q10?></p></td>
</tr>
<tr>
    <td><p>10.1 If you selected disagree or strongly disagree,
please explain why</p></td>
    <td><p><?=$q101?></p></td>
</tr>
<tr>
    <td><p>11. You were always able to tell how well you were doing
whilst playing</p></td>
    <td><p><?=$q11?></p></td>
</tr>
<tr>
    <td><p>12. The game maintained your full attention whilst
playing</p></td>
    <td><p><?=$q12?></p></td>
</tr>
<tr>

```

```

    <td><p>13. It was easy to learn how to play the game</p></td>
    <td><p><?=$q13?></p></td>
</tr>
<tr>
    <td><p>14. How successful were you in the game?</p></td>
    <td><p><?=$q14?></p></td>
</tr>
<tr>
    <td><p>15. The game made good use of sounds and music</p></td>
    <td><p><?=$q15?></p></td>
</tr>
<tr>
    <td><p>16. The game made good use of colour</p></td>
    <td><p><?=$q16?></p></td>
</tr>
<tr>
    <td><p>17. The game made good use of animation</p></td>
    <td><p><?=$q17?></p></td>
</tr>
<tr>
    <td><p>18. The game included a good amount of novelty</p></td>
    <td><p><?=$q18?></p></td>
</tr>
<tr>
    <td><p>19. The game included a good amount of
originality</p></td>
    <td><p><?=$q19?></p></td>
</tr>
<tr>
    <td><p>20. The game included a good amount of
randomness</p></td>
    <td><p><?=$q20?></p></td>
</tr>
<tr>
    <td><p>21. The game included a good amount of humour</p></td>
    <td><p><?=$q21?></p></td>
</tr>
<tr>
    <td><p>22. You found yourself becoming &quot;hooked&quot; or
&quot;addicted&quot; to the game</p></td>
    <td><p><?=$q22?></p></td>
</tr>
<tr>
    <td><p>22.1 Please explain why you think this was</p></td>
    <td><p><?=$q221?></p></td>
</tr>
<tr>
    <td><p>23. Social interaction (competing against other players)
added to the fun of the game</p></td>
    <td><p><?=$q23?></p></td>
</tr>
<tr>
    <td><p>24. Do you feel competitive when playing against other
players?</p></td>
    <td><p><?=$q24?></p></td>
</tr>

```

```

    <tr>
      <td><p>24.1 If yes, do you think this added to the fun of the
game?</p></td>
      <td><p><?=$q241?></p></td>
    </tr>
    <tr>
      <td><p>25. Being the best out of your friends is a key incentive
to keep playing computer games</p></td>
      <td><p><?=$q25?></p></td>
    </tr>
    <tr>
      <td><p>26. Why do you think Tetris is such a popular
game?</p></td>
      <td><p><?=$q26?></p></td>
    </tr>
    <tr>
      <td><p>27. What do you think makes computer games fun?</p></td>
      <td><p><?=$q27?></p></td>
    </tr>
    <tr>
      <td><p>28. What would you do to make the game more fun?</p></td>
      <td><p><?=$q28?></p></td>
    </tr>
</table>
  </div>
</div>
<!-- Footer -->
  <div id="footer">
    <p>
      &copy; Stuart Little.  ALL RIGHTS RESERVED.
    </p>
  </div>

<!-- End Content -->

</div>
<!-- End Wrapper -->

</body>
</html>

```

8.2.4 project.html

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"
"http://www.w3.org/TR/html4/strict.dtd">
<html>
<head>

<title>Stuart Little - A study of fun in computer games</title>

<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<style type="text/css">

* { padding: 0; margin: 0; }

h1 {font-family: Verdana, sans-serif; color: #262626; font-size:
12px;}
h2 {font-family: Verdana, sans-serif; color: #A1A1A1; font-size:
9px; font-style: italic}
p {font-family: Verdana, sans-serif; color: #636363; font-size:
11px;}

body {
text-align: center;
background: #fff;

}
#wrapper {
margin-left:auto; margin-right:auto;
width: 732px;
}
img#header {
display: block;
/*border: 1px solid #ccc;*/
margin-top: 10px;
}
#navigation {
width: 732px;
margin: 0px 0px 0px 0px;

}

#navcontainer
{
margin: 0;
padding: 0;
height: 22px;
font: 11px Verdana, sans-serif;
width: 100%;
border-bottom: 1px solid #cd0000;
list-style-type: none;

}

#navlist li
```

```
{
float: left;
margin: 0;
padding: 0;
width: auto;
display: block;
}

#navlist li a, #navlist li a:link
{
color: #555;
text-decoration: none;
padding: 3px 5px 3px 5px;
display: block;
}

#navlist li a:hover
{
color: #cd0000;
border-bottom: 3px solid #cd0000;
cursor: pointer;
background: #eee;
}

#navlist li a#current, #navlist li a#current:link
{
color: #000;
cursor: default;
font-weight: bold;
border-bottom: 3px solid #cd0000;
}

#navlist li a#current:hover
{
border-bottom: 3px solid #cd0000;
background: #b2b1b1;
}

#content {
text-align: left;
width: 730px;
border: 1px solid #ccc;
margin: 0px 0px 0px 0px;
height: 321px;
}

#footer {
text-align:center;
width: 732px;
background: #cd0000;
margin: 0px 0px 0px 0px;
height:15px;
}

</style>
</head>
```

```

<body>

  <!-- Wrapper -->
  <div id="wrapper">

    <!-- Header -->
    <div id="header">
      
    </div>
    <!-- End Header -->

    <!-- Navigation -->
    <div id="navigation">
      <div id="navcontainer">
        <ul id="navlist">
          <li><a href="index.html">Home</a></li>
          <li><a href="questions.html">Questionnaire</a></li>
          <li id="active"><a href="#"
id="current">Project</a></li>
          <li><a href="contact.html">Contact</a></li>
        </ul>
      </div>
    </div>
    <!-- End Navigation -->

    <!-- Content -->
    <div id="content">
      
      <div style="padding: 20px;">
        <h1>
          Stay Tuned
        </h1>
        <h2 style="border-bottom: 1px dashed #000000; width:
300px;">
        </h2>
        <br>
        <p>
          You will be able to view my completed
project/disseration here on 08/05/2009.
        </p>
      </div>
    </div>
    <!-- Footer -->
    <div id="footer">
      <p>
        &copy; Stuart Little.  ALL RIGHTS RESERVED.
      </p>
    </div>

    <!-- End Content -->
  </div>
  <!-- End Wrapper -->

</body>

```

```
</html>
```

8.2.5 contact.html

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"
```

```
"http://www.w3.org/TR/html4/strict.dtd">
```

```
<html>
```

```
<head>
```

```
<title>Stuart Little - A study of fun in computer games</title>
```

```
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
```

```
<style type="text/css">
```

```
* { padding: 0; margin: 0; }
```

```
h1 {font-family: Verdana, sans-serif; color: #262626; font-size:  
12px;}
```

```
h2 {font-family: Verdana, sans-serif; color: #A1A1A1; font-size:  
9px; font-style: italic}
```

```
p {font-family: Verdana, sans-serif; color: #636363; font-size:  
11px;}
```

```
body {  
text-align: center;  
background: #fff;
```

```
}
```

```
#wrapper {  
margin-left:auto; margin-right:auto;  
width: 732px;
```

```
}
```

```
img#header {  
display: block;  
/*border: 1px solid #ccc;*/  
margin-top: 10px;
```

```
}
```

```
#navigation {  
width: 732px;  
margin: 0px 0px 0px 0px;
```

```
}
```

```
#navcontainer  
{  
margin: 0;  
padding: 0;  
height: 22px;  
font: 11px Verdana, sans-serif;  
width: 100%;  
border-bottom: 1px solid #cd0000;  
list-style-type: none;
```

```
}
```

```
#navlist li
```

```

{
float: left;
margin: 0;
padding: 0;
width: auto;
display: block;
}

#navlist li a, #navlist li a:link
{
color: #555;
text-decoration: none;
padding: 3px 5px 3px 5px;
display: block;
}

#navlist li a:hover
{
color: #cd0000;
border-bottom: 3px solid #cd0000;
cursor: pointer;
background: #eee;
}

#navlist li a#current, #navlist li a#current:link
{
color: #000;
cursor: default;
font-weight: bold;
border-bottom: 3px solid #cd0000;
}

#navlist li a#current:hover
{
border-bottom: 3px solid #cd0000;
background: #b2b1b1;
}

#content {
text-align: left;
width: 730px;
border: 1px solid #ccc;
margin: 0px 0px 0px 0px;
height: 321px;
}

#footer {
text-align:center;
width: 732px;
background: #cd0000;
margin: 0px 0px 0px 0px;
height:15px;
}

</style>
</head>

```

```

<body>

    <!-- Wrapper -->
    <div id="wrapper">

        <!-- Header -->
        <div id="header">
            
        </div>
        <!-- End Header -->

        <!-- Navigation -->
        <div id="navigation">
            <div id="navcontainer">
                <ul id="navlist">
                    <li><a href="index.html">Home</a></li>
                    <li><a href="questions.html">Questionnaire</a></li>
                    <li><a href="project.html">Project</a></li>
                    <li id="active"><a href="#"
id="current">Contact</a></li>
                </ul>
            </div>
        </div>
        <!-- End Navigation -->

        <!-- Content -->
        <div id="content">
            
            <div style="padding: 20px;">
                <h1>
                    Contact Me
                </h1>
                <h2 style="border-bottom: 1px dashed #000000; width:
300px;">
                <br>
                <p>
                    If you have any comments or questions regarding
the content of this site please do not hesitate to contact me and I
will get back to you as soon as possible.
                </p>
                <br>
                <form name="contact" action="contactposted.php"
method="post">

                    <table border=0 cellspacing=5 cellpadding=0>
                    <tr><td>
                        <p>
                            Name:
                        </p>
                    <td>
                        <input type="text" name="name" />
                    <tr><td>
                        <p>

```

```
        E-mail:
    </p>
    <td>
    <input type="text" name="email" />
    <tr><td>
        <p>
            Comment:
        </p>
    <td>
    <textarea name="comment" cols="40" rows="5">
    </textarea>
    <tr><td>
        <input type="submit" value="Submit">
    </table>
    </form>
    </div>
</div>
<!-- Footer -->
    <div id="footer">
        <p>
            &copy; Stuart Little.    ALL RIGHTS RESERVED.
        </p>
    </div>

<!-- End Content -->

</div>
<!-- End Wrapper -->

</body>
</html>
```

8.2.6 contactpostet.php

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"
"http://www.w3.org/TR/html4/strict.dtd">
<html>
<head>

<title>Stuart Little - A study of fun in computer games</title>

<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
<style type="text/css">

* { padding: 0; margin: 0; }

h1 {font-family: Verdana, sans-serif; color: #262626; font-size:
12px;}
h2 {font-family: Verdana, sans-serif; color: #A1A1A1; font-size:
9px; font-style: italic}
p {font-family: Verdana, sans-serif; color: #636363; font-size:
11px;}

body {
text-align: center;
background: #fff;

}
#wrapper {
margin-left:auto; margin-right:auto;
width: 732px;
}
img#header {
display: block;
/*border: 1px solid #ccc;*/
margin-top: 10px;
}
#navigation {
width: 732px;
margin: 0px 0px 0px 0px;

}

#navcontainer
{
margin: 0;
padding: 0;
height: 22px;
font: 11px Verdana, sans-serif;
width: 100%;
border-bottom: 1px solid #cd0000;
list-style-type: none;

}

```

```
#navlist li
{
float: left;
margin: 0;
padding: 0;
width: auto;
display: block;
}

#navlist li a, #navlist li a:link
{
color: #555;
text-decoration: none;
padding: 3px 5px 3px 5px;
display: block;
}

#navlist li a:hover
{
color: #cd0000;
border-bottom: 3px solid #cd0000;
cursor: pointer;
background: #eee;
}

#navlist li a#current, #navlist li a#current:link
{
color: #000;
cursor: default;
font-weight: bold;
border-bottom: 3px solid #cd0000;
}

#navlist li a#current:hover
{
border-bottom: 3px solid #cd0000;
background: #b2b1b1;
}

#content {
text-align: left;
width: 730px;
border: 1px solid #ccc;
margin: 0px 0px 0px 0px;
height: 321px;
}

#footer {
text-align:center;
width: 732px;
background: #cd0000;
margin: 0px 0px 0px 0px;
height:15px;
}

</style>
```

```

</head>

<body>

    <!-- Wrapper -->
    <div id="wrapper">

        <!-- Header -->
        <div id="header">
            
        </div>
        <!-- End Header -->

        <!-- Navigation -->
        <div id="navigation">
            <div id="navcontainer">
                <ul id="navlist">
                    <li><a href="index.html">Home</a></li>
                    <li><a href="questions.html">Questionnaire</a></li>
                    <li><a href="project.html">Project</a></li>
                    <li id="active"><a href="#"
id="current">Contact</a></li>
                </ul>
            </div>
        </div>
        <!-- End Navigation -->

        <!-- Content -->
        <div id="content">
            
            <div style="padding: 20px;">
                <h1>
                    Contact Me
                </h1>
                <h2 style="border-bottom: 1px dashed #000000; width:
300px;">
                </h2>
                <br>
                <p>
                    If you have any comments or questions regarding
the content of this site please do not hesitate to contact me and I
will get back to you as soon as possible.
                </p>
                <br>
                <form name="contact" action="contactposted.php"
method="post">

                    <table border=0 cellspacing=5 cellpadding=0>
                    <tr><td>
                        <p>
                            Name:
                        </p>
                    </td>
                    <td>
                        <input type="text" name="name" />
                    </td>
                    </tr></td>

```

```

        <p>
            E-mail:
        </p>
    <td>
    <input type="text" name="email" />
    <tr><td>
        <p>
            Comment:
        </p>
    <td>
    <textarea name="comment" cols="40" rows="5">
    </textarea>
    <tr><td>
        <input type="submit" value="Submit">
    </td>
    </tr>
    </table>
    </form>
    </div>
</div>
<!-- Footer -->
    <div id="footer">
        <p>
            &copy; Stuart Little.    ALL RIGHTS RESERVED.
        </p>
    </div>

<!-- End Content -->

</div>
<!-- End Wrapper -->

</body>
</html>

```

8.2.7 viewresults.php

```
<html>
<head>
<style type="text/css">
p {font-family: Verdana, sans-serif; color: #636363; font-size:
11px;}
</style>
</head>
<body>
<?
$Lines = file("output.txt");

echo "<pre>";
// Comment out when done
//print_r($Lines);
echo "</pre>";

foreach($Lines as $Key => $Val)
{

    if (strlen($Val) > 5)
    {
        $Data[$Key] = explode("||", $Val);
    }
}

// Comment out when done
//print_r($Data);

echo "<table border=1 cellspacing=0 cellpadding=3>";
echo "  <tr>";
echo "    <td><p>Timestamp</td>";
echo "    <td><p>Q1</td>";
echo "    <td><p>Q2</td>";
echo "    <td><p>Q3</td>";
echo "    <td><p>Q4</td>";
echo "    <td><p>Q5</td>";
echo "    <td><p>Q6</td>";
echo "    <td><p>Q7</td>";
echo "    <td><p>Q8</td>";
echo "    <td><p>Q9</td>";
echo "    <td><p>Q10</td>";
echo "    <td><p>Q10.1</td>";
echo "    <td><p>Q11</td>";
echo "    <td><p>Q12</td>";
echo "    <td><p>Q13</td>";
echo "    <td><p>Q14</td>";
echo "    <td><p>Q15</td>";
echo "    <td><p>Q16</td>";
echo "    <td><p>Q17</td>";
echo "    <td><p>Q18</td>";
```

```

echo "      <td><p>Q19</td>";
echo "      <td><p>Q20</td>";
echo "      <td><p>Q21</td>";
echo "      <td><p>Q22</td>";
echo "      <td><p>Q22.1</td>";
echo "      <td><p>Q23</td>";
echo "      <td><p>Q24</td>";
echo "      <td><p>Q24.1</td>";
echo "      <td><p>Q25</td>";
echo "      <td><p>Q26</td>";
echo "      <td><p>Q27</td>";
echo "      <td><p>Q28</td>";
echo "    </tr>";

```

```
for($K = 0; $K < sizeof($Lines); $K++)
```

```
{
  echo '<tr>';
  echo '<td valign="top"><p>'.$Data[$K][0]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][1]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][2]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][3]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][4]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][5]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][6]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][7]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][8]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][9]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][10]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][11]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][12]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][13]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][14]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][15]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][16]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][17]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][18]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][19]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][20]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][21]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][22]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][23]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][24]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][25]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][26]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][27]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][28]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][29]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][30]. '&nbsp;</td>';
  echo '<td valign="top"><p>'.$Data[$K][31]. '&nbsp;</td>';
  echo '</tr>';
}

```

```
echo "</table>";
```

```
?>
```

```
</body>
```

```
</html>
```

8.2.8 viewcomments.php

```
<?
$Lines = file("comments.txt");

echo "<pre>";
// Comment out when done
//print_r($Lines);
echo "</pre>";

foreach($Lines as $Key => $Val)
{
    if (strlen($Val) > 5)
    {
        $Data[$Key] = explode("||", $Val);
    }
}

// Comment out when done
//print_r($Data);

echo "<table border=1 cellspacing=5 cellpadding=0>";
echo "  <tr>";
echo "    <td>Timestamp</td>";
echo "    <td>name</td>";
echo "    <td>email</td>";
echo "    <td>comment</td>";
echo "  </tr>";

for($K = 0; $K < sizeof($Lines); $K++)
{
    echo '<tr>';
    echo '<td>'.$Data[$K][0].'\</td>';
    echo '<td>'.$Data[$K][1].'\</td>';
    echo '<td>'.$Data[$K][2].'\</td>';
    echo '<td>'.$Data[$K][3].'\</td>';
    echo '</tr>';
}
echo "</table>";
?>
```

8.3 Questionnaire Responses

8.3.1 Participant 1

Timestamp	April 15, 2009, 4:04 pm
Q1	Everyday
Q2	Not very much....
Q3	Average amount of fun
Q4	Whenever i get bored.
Q5
Q6	Winning
Q7	Neither Agree or Disagree
Q8	Not very challenging
Q9	Neither Agree or Disagree
Q10	Agree
Q10.1	
Q11	Agree
Q12	Agree
Q13	Agree
Q14	mediocre
Q15	Neither Agree or Disagree
Q16	Agree
Q17	Agree
Q18	Neither Agree or Disagree
Q19	Neither Agree or Disagree
Q20	Neither Agree or Disagree
Q21	Disagree
Q22	Neither Agree or Disagree
Q22.1	Only play when I have nothing else to do.... or if i should be doing something i don't want to do....
Q23	Agree
Q24	Yes
Q24.1	Yes
Q25	Neither Agree or Disagree
Q26	classic, easy to learn/play
Q27
Q28

8.3.2 Participant 2

Timestamp	April 15, 2009, 4:09 pm
Q1	Everyday other day
Q2	I played it as a child, and I recently started playing for fun on Facebook.
Q3	Extremely good fun
Q4	Yes, I play it about 4 to 5 times a week.
Q5	I love trying to beat my old records, and I try to see if I can beat my friend's records as well. I enjoy the puzzle solving aspect as well.
Q6	The only goal is to become better than you previously were.
Q7	Strongly Agree
Q8	Quite challenging
Q9	Strongly Agree
Q10	Strongly Agree
Q10.1	
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Agree
Q14	I think I'm pretty successful. I can get pretty far into the game on endless modes. I also regularly complete the sprint modes in under 3 minutes.
Q15	Neither Agree or Disagree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Neither Agree or Disagree
Q21	Neither Agree or Disagree
Q22	Strongly Agree
Q22.1	I love puzzle games, and this one doesn't have a specific ending to it like other games.
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Agree
Q26	It's timeless and exciting. I can't enough of getting higher scores.
Q27	There's an endless amount of them, so you'll never get bored.
Q28	I think it's perfect.

8.3.3 Participant 3

Timestamp	April 15, 2009, 7:41 pm
Q1	Everyday
Q2	Alot, perhaps 1-3 hours a day
Q3	Good fun
Q4	1-3 hours a day, every day.
Q5	The competition with friends you know in real-life, and can try and beat.
Q6	To get number one on all the different game modes.
Q7	Agree
Q8	Very challenging
Q9	Strongly Agree
Q10	Agree
Q10.1	
Q11	Agree
Q12	Neither Agree or Disagree
Q13	Strongly Agree
Q14	not very, but i searched around and found guides on the internet which showed me techniques.
Q15	Agree
Q16	Disagree
Q17	Disagree
Q18	Strongly Disagree
Q19	Strongly Disagree
Q20	Strongly Disagree
Q21	Strongly Disagree
Q22	Strongly Agree
Q22.1	Because of the competition with friends, and the way it is easy to view progress, playing ultra you allways watch your performance and see how you did, and then analyse it and play again, allmost unable to stop.
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	because it is simple, easy to pick up, universal with no languages.
Q27	Competition with friends and good graphics.
Q28	im not sure on this one.

8.3.4 Participant 4

Timestamp	April 15, 2009, 8:21 pm
Q1	Everyday
Q2	little
Q3	Extremely good fun
Q4	see question 1.
Q5	the colors
Q6	to finish
Q7	Strongly Agree
Q8	Very challenging
Q9	Strongly Agree
Q10	Strongly Agree
Q10.1	
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	very
Q15	Strongly Agree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Strongly Agree
Q21	Strongly Agree
Q22	Strongly Agree
Q22.1	the colors
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	the colors
Q27	the colors
Q28	more colors

8.3.5 Participant 5

Timestamp	April 15, 2009, 9:27 pm
Q1	Everyday other day
Q2	I've played various versions of the game, and have known some basic-advanced techniques such as the T-spin.
Q3	Extremely good fun
Q4	Yes, occasionally for the rest of my life.
Q5	The fact that the only true "losing" is relative to you and your scores or your scores and others.
Q6	No, not necessarily. Even if makers have certain modes that set an objective, the overall mechanism has no goal.
Q7	Neither Agree or Disagree
Q8	Very challenging
Q9	Strongly Agree
Q10	Strongly Agree
Q10.1	
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	Moderately successful, enough to make me happy.
Q15	Strongly Agree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Strongly Agree
Q21	Neither Agree or Disagree
Q22	Strongly Agree
Q22.1	Good community and fanbase, it was a challenge for myself, no completely idiotic moronic fan boys or anger management players to my knowledge.
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Agree
Q26	It's easy to recognize from any screen, b/w or color, what you're playing. While there are variations, the overall goal is the same.
Q27	It's easy to pick up and start.
Q28	In reference to all games and not just Tetris, making a game winnable using simplistic methods while at the same time making intricate methods of play that reward the user, with both offline and online play, but is still relatively balanced within the skill range of each.

8.3.6 Participant 6

Timestamp	April 15, 2009, 9:27 pm
Q1	Everyday other day
Q2	I have played and enjoyed Tetris since it came out on Atari, and one of my first PC games ever! (Windows 3.1)
Q3	Good fun
Q4	I just found it on facebook and immediately added it. I'll play it whenever I have some free time
Q5	The challenge of getting the 'tower' back down after you leave one too many gaps
Q6	The goal should be to keep the tower as short as possible. There is skill in building up a solid mass of 4-8 lines, waiting for the straight piece to just drop down the side for a quad bonus
Q7	Strongly Agree
Q8	Quite challenging
Q9	Strongly Agree
Q10	Strongly Agree
Q10.1	
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Agree
Q14	Overall I do pretty well with the game. In terms of the new facebook edition, there are many different versions of play, each offering a unique challenge
Q15	Strongly Agree
Q16	Strongly Agree
Q17	Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Agree
Q21	Neither Agree or Disagree
Q22	Strongly Agree
Q22.1	The variety in play versions, maintained the original rules of the game and implementing flash graphics.
Q23	Neither Agree or Disagree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	The rules are simple and the challenge never ends until you make it to the top. There are no 'dull' moments
Q27	An element of strategy and open ended gameplay
Q28	Play variation and additional animation

8.3.7 Participant 7

Timestamp	April 15, 2009, 11:45 pm
Q1	Everyday
Q2	Since I was about 5. I'm 17 now.
Q3	Extremely good fun
Q4	Everytime I get the chance.
Q5	When there are different modes. For example, Tetris Friends has Sprint, Ultra, etc.
Q6	Yes. That goal to be able to manipulate blocks to make lines.
Q7	Strongly Agree
Q8	Very challenging
Q9	Strongly Agree
Q10	Strongly Agree
Q10.1	
Q11	Neither Agree or Disagree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	I would say I'm usually successful when I'm not being distracted.
Q15	Neither Agree or Disagree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Neither Agree or Disagree
Q19	Agree
Q20	Disagree
Q21	Strongly Disagree
Q22	Strongly Agree
Q22.1	on Tetris Friends, there is a mode of Tetris known as Sprint. Sprint is a mode in which the goal is to clear 40 lines as fast as possible. I have been hooked to this mode for weeks to just get better.
Q23	Neither Agree or Disagree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	It makes you want to think more.
Q27	Their content, obviously. People like a challenge.
Q28	If more people became involved in playing.

8.3.8 Participant 8

Timestamp	April 16, 2009, 12:28 am
Q1	Everyday
Q2	many many years
Q3	Good fun
Q4	yes everday
Q5	different modes/trying to do better each time
Q6	be the best
Q7	Agree
Q8	Somewhat challenging
Q9	Strongly Agree
Q10	Strongly Agree
Q10.1	
Q11	Strongly Agree
Q12	Agree
Q13	Strongly Agree
Q14	very successful
Q15	Neither Agree or Disagree
Q16	Agree
Q17	Neither Agree or Disagree
Q18	Neither Agree or Disagree
Q19	Neither Agree or Disagree
Q20	Neither Agree or Disagree
Q21	Neither Agree or Disagree
Q22	Agree
Q22.1	i come back everyday
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	its simple/fun
Q27	able to go against other players
Q28	pvp

8.3.9 Participant 9

Timestamp	April 16, 2009, 5:52 am
Q1	Everyday
Q2	First exposure to the game last year and been playing since.
Q3	Good fun
Q4	Yes. I play it daily.
Q5	The competition between our friends and all Tetris Friends users (through the leaderboards).
Q6	Climb up the leaderboards!
Q7	Agree
Q8	Somewhat challenging
Q9	Agree
Q10	Agree
Q10.1	
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	I'd say I'm pretty successful. Past the 90th percentile for each game so far and in the Top 100 for some.
Q15	Neither Agree or Disagree
Q16	Neither Agree or Disagree
Q17	Agree
Q18	Agree
Q19	Agree
Q20	Neither Agree or Disagree
Q21	Neither Agree or Disagree
Q22	Agree
Q22.1	The desire to be the best among my friends and most of Facebook users.
Q23	Disagree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	Game is surprisingly simple to play but requires skills to be among the best.
Q27	
Q28	

8.3.10 Participant 10

Timestamp	April 17, 2009, 3:08 pm
Q1	Once a month
Q2	I used to play on sega mega drive columns all the time as a child, its quite similar
Q3	Extremely good fun
Q4	At the moment i have rediscovered it, after losing where it was on facebook.i play about 10 games aday- or until my eyes go square
Q5	its just addictive, competing against someone else if fun
Q6	to get a tetris! 4 rows complete at one time and score the highest points
Q7	Strongly Agree
Q8	Quite challenging
Q9	Neither Agree or Disagree
Q10	Agree
Q10.1	
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	i think im quite good at it.
Q15	Neither Agree or Disagree
Q16	Agree
Q17	Disagree
Q18	Neither Agree or Disagree
Q19	Agree
Q20	Agree
Q21	Neither Agree or Disagree
Q22	Strongly Agree
Q22.1	competitive streak in me, its easy to do when bored at the computer
Q23	Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	simple to learn, accessible, anyone can master it
Q27	simplicity
Q28	stacking dirrefent celebrity heads?

8.3.11 Participant 11

Timestamp	April 18, 2009, 3:30 am
Q1	Everyday
Q2	I played Tetris when I was younger from about the age of 8 until 12 on the gameboy. I did not play for at least 10 years following that until 3 months ago, and have been playing daily for the last 3 months on the facebook application.
Q3	Good fun
Q4	yes I will play until I am top 10 in all of facebook, I currently 25th place on the 'all of facebook' leaderboard.
Q5	Setting yourself a new high score, playing with perfect strategy.
Q6	Yes the goal of the game is to complete it. When completion of the game is no longer a challenge the next goal is to play it as perfectly as possible, and getting a higher score.
Q7	Strongly Agree
Q8	Very challenging
Q9	Strongly Agree
Q10	Neither Agree or Disagree
Q10.1	With tetris unlike a lot of games you can always get better at it, there are always ways to improve - this keeps it challenging and fun.
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Agree
Q14	Very successful
Q15	Agree
Q16	Strongly Agree
Q17	Neither Agree or Disagree
Q18	Neither Agree or Disagree
Q19	Agree
Q20	Strongly Agree
Q21	Disagree
Q22	Agree
Q22.1	I can't explain it really, probably the same reason I am addicted to scrabble - I probably just have an addictive personality lol
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	Because anyone can learn to play it and try to complete it. It's not gender specific or interest specific i.e. shoot 'em ups, sports games etc.
Q27	The challenge probably
Q28	Take the game to level 20 and multiply the speed at the highest levels, so only the sharpest players could complete the game

8.3.12 Participant 12

Timestamp	April 18, 2009, 12:01 pm
Q1	Everyday other day
Q2	i started playing occasionally 4 years ago on my friend's DS, tetris friends for about 3 months.
Q3	Extremely good fun
Q4	YES!, i will play as long as it doesn't get boring, once every other day
Q5	it's so simple and so fun
Q6	I want to beat my high score, of course.
Q7	Agree
Q8	Very challenging
Q9	Neither Agree or Disagree
Q10	Strongly Agree
Q10.1	
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	on tetris friends, I have about 548,000 points, which i suppose is pretty good.
Q15	Strongly Agree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Disagree
Q21	Neither Agree or Disagree
Q22	Agree
Q22.1	there's a drive, to always keep moving forward and i define that as beating myself at something.
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Neither Agree or Disagree
Q26	because it was sold on a gameboy and marketed nearly everywhere
Q27	no idea, they just ARE.
Q28	battle mode on facebook.

8.3.13 Participant 13

Timestamp	April 18, 2009, 9:24 pm
Q1	Once a week
Q2	a few years
Q3	Extremely good fun
Q4	a few times a week
Q5	
Q6	keep going. in some versoins you can win. get a hightscore
Q7	Strongly Agree
Q8	Somewhat challenging
Q9	Agree
Q10	Strongly Agree
Q10.1	
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	depends when, geerally halfway to the finish
Q15	Strongly Agree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Strongly Agree
Q21	Strongly Agree
Q22	Strongly Agree
Q22.1	its tetris, its classic. its soimple enough for anyone but it keeps your attention
Q23	Neither Agree or Disagree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	its been around so long and its so simple
Q27	
Q28	

8.3.14 Participant 14

Timestamp	April 19, 2009, 12:08 am
Q1	Everyday
Q2	quite a bit.
Q3	Extremely good fun
Q4	yes, daily.
Q5	the chance for obsessive organizers to place all of the blocks in lovely order.
Q6	highest score!
Q7	Agree
Q8	Somewhat challenging
Q9	Agree
Q10	Strongly Disagree
Q10.1	the levels end, and the is not an endless version so i get booted off at 15 levels even if i could do more.
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	Best out of my friends
Q15	Neither Agree or Disagree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Strongly Agree
Q21	Strongly Agree
Q22	Agree
Q22.1	it's a way to pass the time, when there is nothing to read and i need a break from homework.
Q23	Neither Agree or Disagree
Q24	Yes
Q24.1	No
Q25	Disagree
Q26	ease of playing, universal appeal, no language barrier.
Q27	Opportunity for improvement and a little bit of competition.
Q28	fix the glitches and, make and endless version.

8.3.15 Participant 15

Timestamp	April 19, 2009, 1:10 am
Q1	Once a week
Q2	I first played GB Tetris around 15 or 16 years ago and have been playing various Tetris games ever since. My current focus is the "Tetris: The Grand Master" series, which I've been playing for a couple of years now.
Q3	Extremely good fun
Q4	Yes. I play Tetris whenever I've got some free time to kill. I like to play at least 10 or 15 minutes a day, but I haven't been able to fit Tetris into my schedule regularly as of late.
Q5	<p>Problem solving. It's a puzzle, and you've got to be quick on your feet to choose the best course of action. A lot of the fun comes from overcoming the challenges of new constraints or conditions throughout the course of the game. Whether it is dealing with restricted placement options at the fastest gravity in a single player mode or trying to downstack through garbage an opponent is sending you, the fun comes from developing appropriate strategies to deal with the situation at hand. Most official Tetris games must adhere to the "guideline" that The Tetris Company has set in place. An unfortunate quality of that guideline is that it sets the skill cap too low. In particular, the rotation and lockdown rules make things far too easy. The overly lenient rules take a lot of the challenge out of maintaining a viable stack. Once you hit that skill cap, the fun from overcoming new challenges drops off significantly. The "forced" speed or challenges have been overcome, and "optional" speed is all that is left. So, while one of the entertaining aspects of Tetris is overcoming new challenges, guideline Tetris says "you're on your own" relatively quickly. I don't think it is any wonder that expert players primarily look toward guideline games for the multiplayer aspect. While the single player modes eventually stop getting any harder, players -- and therefore potential opponents -- aren't going to stop getting better any time soon. Since there also many factors that make guideline games difficult to play quickly, "optional speed" modes like Sprint and Ultra offer a challenge in the form of pushing yourself to the limit are sort of a hassle to play. If I want to have fun playing Sprint, I take it somewhere other than Tetris Friends. Similarly, if I want a suitably deep and interesting survival challenge, I'll look toward TGM. TGM1 alone is so much more interesting to play than guideline Marathon. (It probably doesn't help that Marathon still sports a broken scoring system that makes it difficult to break away from specific target scores for each level no matter how well one is playing. Scoring probably would have been its only saving grace otherwise.) I think TGM succeeds at being such a fun game since it provides such a streamlined environment to play in. The challenge in GB Tetris feels like a bit of a cop out since it comes from poor controls -- the autorepeat is nigh unusable -- coupled with instant lockdown. 1988 Sega Tetris is a step up despite being released a year earlier since it provides fast autorepeat, lock delay, and a rotation table intended for use at high gravity. It still isn't quite there since it has a very unbalanced randomizer and only one rotation direction, but it was a step in the right direction. TGM took the Sega Tetris formula and then tuned it to support new and exciting challenges. Guideline Tetris, on the</p>

	other hand, does a lot to make the game too easy. Guideline games are also far from streamlined; They sport unreasonably slow game flow (long delays, etc.) and unintuitive rotation behaviors at max gravity. So, I guess the key is to avoid letting up on the challenges too early, as well as ensuring that the game has an environment that is comfortable and intuitive to play in for all levels of players.
Q6	In my opinion, the goal is self-improvement, haha. There is always another challenge on the horizon. Even if you have completed a Marathon-like mode, you can always strive for higher scores or faster completion. I may already have my TGM1 GM, but that doesn't stop me from going back and playing for time attack. There are even self-imposed challenges like pattern drawing that were not intended as a goal of the mode one is playing, yet still develop interesting skills. Tetris is open-ended like that, haha. Even after completion, there is always room to improve one's performance. If I had to summarize my goals when playing in a word, it would definitely be self-improvement.
Q7	Strongly Agree
Q8	Quite challenging
Q9	Strongly Agree
Q10	Disagree
Q10.1	Most games today are based on the guideline, the guideline doesn't provide difficulty after a certain point, therefore most Tetris games don't offer the appropriate levels of difficulty. I have to think TGM does a better job in that regard. The learning curve is a bit steep, but it doesn't throw you all the way into the deep end to start. TGM2 Normal and TGM3 Easy are still perhaps a tad too difficult for absolute beginners. (I think that the ideal progression would be to move from something like Tetris Plus to TGM.) Despite some difficulties at the low end, I think TGM games have an excellent selection of difficulties once you've got over the initial hump.
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	I'd say I'm an expert; I've got my fair share of accomplishments, even though I think I still have a long way to go. Other than my typical training on TGM2, I'm starting to realize I'm lacking a bit in terms of multiplayer. Like I said earlier, there is always something to work on, haha.
Q15	Strongly Agree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Strongly Agree
Q21	Neither Agree or Disagree
Q22	Strongly Agree
Q22.1	I can't rightly say, haha. I just seem to really like puzzles, and Tetris in particular. If you take a look at the other kinds of games I play -- music games, bullet hell shoot 'em ups, Pac-Man Championship Edition, Quake, etc. -- I think one can see why I'm drawn to TGM in particular. I like to have a challenge to overcome, and I like having to think and act quick. I guess Tetris (especially TGM) just plays into that perfectly. I guess I just find it fulfilling to play.

Q23	Strongly Agree
Q24	Yes
Q24.1	No
Q25	Neither Agree or Disagree
Q26	I don't think there is one clear reason that it is so popular. I think the fact that it is easy to pick up but difficult to master is definitely a contributing factor. The initial learning curve isn't excessively steep, but the game will be able to challenge a player for a long time. Also, thanks to piece randomization, every game is unique. There is incredible replay value for little initial investment. Past that, I can't really say. Some play to relax, some play to kill free time, some play for a challenge, and so on. I think that Tetris is very open ended, so there are so many different things people could find to enjoy in it.
Q27	Again, I can't rightly say, haha. Having a problem to solve, a challenge to overcome, a compelling story to follow, playing with friends, ... There are so many different reasons that people find games entertaining. I don't think I could even begin to identify all the reasons _I_ find them fun, haha.
Q28	I like to think there is a way to find a middleground between casual guideline and hardcore TGM -- to find a fair rule set that can offer something for everyone. What I would want to do is fix some of the guideline's clearly broken qualities and provide a rule set that can be appreciated by a wider audience.

8.3.16 Participant 16

Timestamp	April 19, 2009, 1:36 am
Q1	Everyday other day
Q2	Four years
Q3	Average amount of fun
Q4	Yes, every other day.
Q5	Challenge.
Q6	n/a
Q7	Neither Agree or Disagree
Q8	Somewhat challenging
Q9	Neither Agree or Disagree
Q10	Strongly Agree
Q10.1	
Q11	Agree
Q12	Agree
Q13	Strongly Agree
Q14	Very.
Q15	Neither Agree or Disagree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Strongly Agree
Q19	Neither Agree or Disagree
Q20	Disagree
Q21	Strongly Disagree
Q22	Neither Agree or Disagree
Q22.1	I just use it to releav stress. Nothing more, therefore nothing to really get addicted to.
Q23	Neither Agree or Disagree
Q24	No
Q24.1	Yes
Q25	Strongly Agree
Q26	Its a long running game that's easy for all ages.
Q27	Challenge and the ability to be good at it and grow on it.
Q28	Nothing.

8.3.17 Participant 17

Timestamp	April 19, 2009, 6:57 am
Q1	Everyday
Q2	I played it as a child on the old Gameboy.
Q3	Extremely good fun
Q4	Yes, very often. It is addictive.
Q5	It is repetitive but there is a goal to achieve at the end of it. It is difficult to achieve this goal, which makes the game fun.
Q6	It is repetitive but there is a goal to achieve at the end of it. It is difficult to achieve this goal, which makes the game fun.
Q7	Strongly Agree
Q8	Quite challenging
Q9	Strongly Agree
Q10	Strongly Agree
Q10.1	
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	Moderately successful, I consistently reach the latter levels of the game.
Q15	Neither Agree or Disagree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Neither Agree or Disagree
Q21	Neither Agree or Disagree
Q22	Strongly Agree
Q22.1	The challenge of trying to win makes it compulsive to play it over and over, for me.
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Agree
Q26	It's a simple concept, so it's easy to grasp.
Q27	Bright colours and something that requires a bit of thought.
Q28	I can't think of anything to improve it, I think it's great as it is.

8.3.18 Participant 18

Timestamp	April 19, 2009, 4:43 pm
Q1	Once a month
Q2	I dont play very often but i like to think im skilled(tetris friends on facebook said my score was in the 92nd percentile worldwide)
Q3	Extremely good fun
Q4	Yes, about once a month
Q5	Finding interesting ways of clearing lines
Q6	Yes, to beat the high score, or to top your own personal best, or to make it to the last level
Q7	Strongly Agree
Q8	Quite challenging
Q9	Agree
Q10	Agree
Q10.1	
Q11	Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	very succesful, im better than 92% of the world
Q15	Strongly Agree
Q16	Strongly Agree
Q17	Neither Agree or Disagree
Q18	Strongly Agree
Q19	Agree
Q20	Strongly Agree
Q21	Strongly Agree
Q22	Neither Agree or Disagree
Q22.1	I felt compelled to play a game to the end without stopping to the point of missing phone calls to continue playing, but i never felt compelled to start another game
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	Because of its simplicity and mildly addictive qualities.
Q27	A good implementation of the concept the game tries to be.
Q28	More game variations

8.3.19 Participant 19

Timestamp	April 19, 2009, 11:11 pm
Q1	Everyday
Q2	Alot
Q3	Extremely good fun
Q4	Pretty much on a daily basis
Q5	that it requires you to be smart, it is in no way repetitive (you'll never play the same game twice) and it helps me space out and relax. it should be taught in school.
Q6	You don't "win" at tetris, you just live for slightly longer each time. it may sound depressing that you are destined to fail, but how long it takes you to fail is the challenge
Q7	Strongly Agree
Q8	Somewhat challenging
Q9	Strongly Agree
Q10	Strongly Agree
Q10.1	initially the game was challenging, but now finishing all the levels has become second nature. getting a super high score is too much work.
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	At first i sucked, but after constantly playing it I feel i was pretty successful.
Q15	Strongly Agree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Strongly Agree
Q21	Neither Agree or Disagree
Q22	Strongly Agree
Q22.1	It's pretty hard to fuck up a game as simple as Tetris, yet there are still shitty clones that exist on the internet.
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	because of its simplicity
Q27	a mixture of gameplay, graphics, sound and story. obviously not story in Tetris. overall, it should just "BE" cool without needing a particular reason.
Q28	A bigger playing feild, more levels and a better 2 player system

8.3.20 Participant 20

Timestamp	April 20, 2009, 1:14 am
Q1	Everyday
Q2	Skilled with the regular tetris. New to the modern tetris!
Q3	Good fun
Q4	As often as Im able to
Q5	To be able to train yourself to be faster and faster. I think its a cool oldscool game, and therefore cool to be good at :D
Q6	That you never reach your goal, because your goal is to beat your own highscore, and that will last forever because it is impossible to get all available points.
Q7	Agree
Q8	Quite challenging
Q9	Strongly Agree
Q10	Agree
Q10.1	Because it is tetris, as faster you are as more skilled you are. And also there are the new modern twist, with the t-spins, the ultra game mode and so forth.
Q11	Agree
Q12	Agree
Q13	Agree
Q14	second best through my entire network of friends.
Q15	Neither Agree or Disagree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Neither Agree or Disagree
Q19	Neither Agree or Disagree
Q20	Agree
Q21	Agree
Q22	Strongly Agree
Q22.1	Because I just need to get my T-dosis!
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	Oldschool and I think it is becoming in among computer games.
Q27	When your concentration is mainly focused at the game.
Q28	be able to battle each other live, so you see two screens, or even more with different players, example your friends or even the entire facebook network. PLEASE MAKE IT HAPPEN :)

8.3.21 Participant 21

Timestamp	April 20, 2009, 3:06 am
Q1	Everyday
Q2	Been playing since it was released on the Nintendo system and Gameboy.
Q3	Extremely good fun
Q4	Of course. It never gets old!
Q5	It's so simple, yet so challenging. I'm not the greatest player, but I feel like I can get better.
Q6	Each variant is a little different, but I think the end goal is lasting as long as the challenge at hand. Levels, time, points, etc.
Q7	Strongly Agree
Q8	Very challenging
Q9	Strongly Agree
Q10	Strongly Agree
Q10.1	Since I can rarely beat Level 15, I think the balance is great.
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Agree
Q14	Fairly successful. I'm pretty good, but not great. On a scale of 1-10, I'd say I'm about an 7.5.
Q15	Strongly Agree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Strongly Agree
Q21	Neither Agree or Disagree
Q22	Strongly Agree
Q22.1	Because you always feel like you can do better than the last game you played.
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	No other game is this simple, yet compelling enough to play over and over again. Thank goodness Tetris Friends is free!
Q27	I usually like a fun challenge. Games I play the most are also easy to get into (i.e., no cumbersome downloads, etc.).
Q28	Real-time multiplayer would be awesome.

8.3.22 Participant 22

Timestamp	April 20, 2009, 8:13 am
Q1	Everyday
Q2	i started playing tetris last year around september and last time i played was pretty much 7-8 years ago.
Q3	Extremely good fun
Q4	i play the game practically everyday
Q5	trying to be #1 on your friend's list
Q6	practicing you're speeding skills and how well you can build the game
Q7	Strongly Agree
Q8	Very challenging
Q9	Strongly Agree
Q10	Neither Agree or Disagree
Q10.1	
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Agree
Q14	not too successful yet because each time i beat my friend in #1, i get beaten again.
Q15	Strongly Agree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Strongly Agree
Q21	Disagree
Q22	Strongly Agree
Q22.1	it's just really addicting trying to make new scores and you're really competing against other people in the world.
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	probably because its an addicting game
Q27	getting a good high score.
Q28	have other tetris modes.

8.3.23 Participant 23

Timestamp	April 20, 2009, 8:23 pm
Q1	Everyday
Q2	I play it on Facebook
Q3	Extremely good fun
Q4	I will play tetris every day
Q5	I don't know
Q6	I think my goal is to beat my friends
Q7	Agree
Q8	Quite challenging
Q9	Agree
Q10	Strongly Agree
Q10.1	
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	
Q15	Neither Agree or Disagree
Q16	Agree
Q17	Agree
Q18	Agree
Q19	Strongly Agree
Q20	Strongly Agree
Q21	Neither Agree or Disagree
Q22	Strongly Agree
Q22.1	Because you want to go back and beat your score
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	Because the rules and concept are easy to pick up and the game is easy to pick up and play
Q27	-
Q28	I would have a wider choice of music

8.3.24 Participant 24

Timestamp	April 21, 2009, 2:47 am
Q1	Once a week
Q2	First played in high school - 7 years ago.
Q3	Good fun
Q4	Play more often with finals coming up to relieve stress and have fun
Q5	The different modes and visual puzzle aspect
Q6	
Q7	Strongly Agree
Q8	Somewhat challenging
Q9	Strongly Agree
Q10	Agree
Q10.1	
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	Pretty good, the best out of my friends but not about to enter into a Tetris Championship. Its all about the strategy.
Q15	Strongly Agree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Neither Agree or Disagree
Q19	Strongly Agree
Q20	Strongly Agree
Q21	Neither Agree or Disagree
Q22	Strongly Agree
Q22.1	Can compare scores over time and to friends.
Q23	Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	All kinds of difficulty and many successful strategies, but most of all you don't really have to have a strategy to enjoy it (aka not overly complicated)
Q27	
Q28	More modes!

8.3.25 Participant 25

Timestamp	April 21, 2009, 4:16 pm
Q1	Everyday
Q2	Well...I've been playing it for about 10 years now.
Q3	Good fun
Q4	Everyday, it's a blast.
Q5	The logic part of it, the playability of it. By that I mean that you can play 100 times one after another and you always do thing differently.
Q6	Goal...hmm...the goal could be-except from the obvious one, to score points during a time limit, etc.- to improve your reaction time.
Q7	Agree
Q8	Somewhat challenging
Q9	Agree
Q10	Agree
Q10.1	
Q11	Agree
Q12	Agree
Q13	Agree
Q14	Pretty successful, on the facebook edition, I'm ranking first and second place in all the categories.
Q15	Neither Agree or Disagree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Agree
Q19	Strongly Agree
Q20	Agree
Q21	Neither Agree or Disagree
Q22	Strongly Agree
Q22.1	It's simple really. Its an easy to learn, easy to play, easy to get hooked by game.
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Agree
Q26	Its a simple, yet ingenious puzzle game. It is extrememly challenging, for both the novice and experienced players
Q27	Personally, I love multiplayer gaming. I don't get a lot out of competing against a computer.
Q28	Real time versus?

8.3.26 Participant 26

Timestamp	April 21, 2009, 7:26 pm
Q1	Everyday
Q2	a little
Q3	Average amount of fun
Q4	daily - 6 / 7 times
Q5	satisfaction in beating own score / timed play or other online players
Q6	to have fun
Q7	Agree
Q8	Somewhat challenging
Q9	Neither Agree or Disagree
Q10	Agree
Q10.1	
Q11	Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	I did what I feel is average, given my high scores
Q15	Agree
Q16	Strongly Agree
Q17	Disagree
Q18	Neither Agree or Disagree
Q19	Agree
Q20	Agree
Q21	Disagree
Q22	Neither Agree or Disagree
Q22.1	While it's fun, I can walk away at any time, and start playing at any time.
Q23	Agree
Q24	Yes
Q24.1	Yes
Q25	Agree
Q26	It is easy to play, but hard to master.
Q27	The coordination and/or mental cleverness needed to do well in them.
Q28	Real-time competition

8.3.27 Participant 27

Timestamp	April 22, 2009, 6:19 am
Q1	Everyday
Q2	Too much experience...everyday basically an hour for 15 years now almost via all sorts of different versions.
Q3	Extremely good fun
Q4	Yes and daily.
Q5	The competition online these days is fun and for me personally I love the different strategies involved depending on what type I'm playing. i.e. line by line as fast as I can for Sprint version. Or saving to do back-to-back tetrises in the versus mode to send my opponent a quick 10 lines.
Q6	The goal is to fight off the constant attack of pieces continually thrown at you. The better you get at the game the more and more fun it becomes, as you try to use different strategies and mix things up while sometimes achieving high scores or beating your opponents.
Q7	Strongly Agree
Q8	Somewhat challenging
Q9	Strongly Agree
Q10	Agree
Q10.1	
Q11	Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	I've won Denver Tetris League (www.tetrisleague.com) 9 times now, which is the most for the league and basically every version I play I feel I'm amongst the top players. I'm just finally getting used to playing on PC now if you check out tetrisfriends.com leaderboard for CO. SiRTeTRiS should be amongst the top 5 for every version.
Q15	Agree
Q16	Neither Agree or Disagree
Q17	Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Strongly Agree
Q21	Disagree
Q22	Strongly Agree
Q22.1	Every game is different all though your goals within each game are usually similar. But each individual game you can try to do better than your previous.
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Agree
Q26	It's quite simple and yet highly addictive and I think in general now it's become such a huge success that everyone's heard of it and wants to try it out. Once they do they want to improve their skills obviously to become

	better and more competitive amongst friends.
Q27	The availability for one, if your alone and don't have much else to do you can just fire up your computer and play with ease. Also, in today's age now the idea of playing with friends online or making new friends via games is nice. Programs like Vent, Team Speak, Skype, etc. also allow for you to talk to your friends while playing games.
Q28	More creativity and more challenges. I think games need to combine efforts, a lot of times like take EA for instance. They have 2 of the best sports series via Madden & NBA Live, there's individual features in both as far as franchise/dynasty modes and side games that if were combined would make each series much better. In terms of Tetris, they've added the t-spin which I don't particularly like and I think competition-wise there should be a bracket that uses t-spins and doesn't because they make the t-spin worth more than tetrises, which definitely ruins the game partially in my opinion. It's called Tetris and not T-Spin for a reason...

8.3.28 Participant 28

Timestamp	April 22, 2009, 11:11 am
Q1	Everyday
Q2	I started tetris when I was 10, playing on and off. From then up until two days ago, i rarely played it. however i am getting back into it now.
Q3	Good fun
Q4	Yes, when I get home from school, whenever I have free time.
Q5	The excitement the buzz. You see, I have come from a first person shooter background. I suppose it helps with reaction time also. Another aspect in which I find it fun is the high score business. I love beating my high score!
Q6	The goal ultimately is to reach level 15, at the same time accumulating high points. This is done by the "tetris"!
Q7	Agree
Q8	Very challenging
Q9	Agree
Q10	Strongly Agree
Q10.1	
Q11	Strongly Agree
Q12	Agree
Q13	Strongly Agree
Q14	I started off scraping only 15'000. Now wit strategy I am reaching 150 000 + points. Mind you this is on the facebook Tetris Frinds App.
Q15	Agree
Q16	Strongly Agree
Q17	Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Agree
Q21	Agree
Q22	Strongly Agree
Q22.1	The thrill of obtaining that higher score!
Q23	Agree
Q24	Yes
Q24.1	Yes
Q25	Disagree
Q26	It is so simple to learn, yet so hard to master. It takes intelligence and quick, decisive thinking to achieve that level of fun.
Q27	Social interaction, good quality game and the thrill and excitement
Q28	Online versing- at the same time! Ways in which to change the style of the theme song. (keeping the same rhythm and tune but different beat. For eg/A "techno" version of the Tetris song!)

8.3.29 Participant 29

Timestamp	April 22, 2009, 9:22 pm
Q1	Everyday other day
Q2	Three or four year player.
Q3	Good fun
Q4	I will play the game again, at least once every couple of days, because I have hi-scores to chase down! :p
Q5	Competing against your friends' hi-scores. Nothing better then the accomplishment of besting someone, the result of careful playing and imposing your superior skill over the other.
Q6	There is no true goal. You just do as well as you want to. If that means, for someone, screwing around and only getting 9000, or someone who wants to be the world champ scoring in the 900 000's, it's all up to you what you want out of the game.
Q7	Strongly Agree
Q8	Somewhat challenging
Q9	Strongly Agree
Q10	Strongly Agree
Q10.1	
Q11	Neither Agree or Disagree
Q12	Agree
Q13	Disagree
Q14	I have posted a Marathon hi-score of hovering around 700 000. I look to improve my lukewarm Sprint times of 2:00 minutes. I am #1 or #2 in almost every variant on my friends list.
Q15	Neither Agree or Disagree
Q16	Strongly Agree
Q17	Disagree
Q18	Agree
Q19	Agree
Q20	Disagree
Q21	Strongly Disagree
Q22	Strongly Agree
Q22.1	Just the fact that I felt so close to beating a friend's hi-score, and I could not stop or feel satisfied until I had.
Q23	Strongly Agree
Q24	
Q24.1	
Q25	Strongly Agree
Q26	It's the type of puzzler anybody can pick up and play. Easy to learn, but difficult to master. It has the appropriate fun for the casuals, but there are advanced techniques and strategies that the advanced players employ to do great, and thus, it keeps them interested.
Q27	Competing with friends and achieving! That's the name of the game.
Q28	Add more cool variants! Perhaps a version with power-ups.

8.3.30 Participant 30

Timestamp	April 22, 2009, 9:44 pm
Q1	Everyday other day
Q2	Three to four years, play time limited to every few months on and off.
Q3	Extremely good fun
Q4	Up to every day in sporadic periods ranging between months to weeks.
Q5	Getting better at the game and reaching new scores etc
Q6	To get better at playing Tetris, sometimes compete with friends to get better scores.
Q7	Disagree
Q8	Somewhat challenging
Q9	Agree
Q10	Agree
Q10.1	
Q11	Neither Agree or Disagree
Q12	Strongly Agree
Q13	Disagree
Q14	Very successful usually due to experience
Q15	Strongly Agree
Q16	Agree
Q17	Disagree
Q18	Disagree
Q19	Disagree
Q20	Agree
Q21	Disagree
Q22	Strongly Agree
Q22.1	Easy access to the game, want to "better self" each time
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	Simple concept, quite hard to get good at the game but easy to start. also somewhat an iconic symbol for games
Q27	
Q28	improve number of special features to play with, effects etc. also make it easier to play against specific friends.

8.3.31 Participant 31

Timestamp	April 24, 2009, 6:29 am
Q1	Everyday other day
Q2	I've been playing for probably about 10 years, first starting with Tetris on gameboy. But I've been playing tetris friends on facebook for about 8 months
Q3	Good fun
Q4	I play every couple of days and will continue to do so. It's a good way to wind down at the end of the day.
Q5	I like competing against my friends and trying to beat their score, for the most part.
Q6	Being the competitive person I am, I find the goal to get a higher score than my friends. Although I do enjoy beating my own high scores.
Q7	Strongly Agree
Q8	Quite challenging
Q9	Agree
Q10	Strongly Agree
Q10.1	
Q11	Agree
Q12	Agree
Q13	Strongly Agree
Q14	Hmm I have no idea what scores i've got but playing Tetris Friends in Marathon mode can keep me occupied for about 20mins per game.
Q15	Agree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Agree
Q19	Agree
Q20	Strongly Agree
Q21	Neither Agree of Disagree
Q22	Strongly Agree
Q22.1	The competitive nature of the game keeps me going back trying to better myself and beat my friends
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	It's simple and easy to learn and as you become a better player the difficulty increases with you.
Q27	Good use of sound, colour and animation with also good fluid gameplay.
Q28	Possibly more social interaction with other players within the game.

8.3.32 Participant 32

Timestamp	April 24, 2009, 7:07 pm
Q1	Once a week
Q2	1 year and a half
Q3	Good fun
Q4	used to play everyday but now im playing less and less
Q5	being top of the friends leaderboard
Q6	depends on which mode but generally the goal of tetris is to score as many points as possible
Q7	Agree
Q8	Quite challenging
Q9	Strongly Agree
Q10	Agree
Q10.1	i believe that tetris helps you to reconize patterns more quickly and efficiently
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Agree
Q14	im the top of my friends leaderboard and usually around the 90th percentile out of all of fb
Q15	Agree
Q16	Agree
Q17	Neither Agree of Disagree
Q18	Agree
Q19	Disagree
Q20	Strongly Disagree
Q21	Disagree
Q22	Strongly Agree
Q22.1	it was just really fun to play. cleaning tetrises and scoring high always made me feel happy
Q23	Agree
Q24	Yes
Q24.1	Yes
Q25	Agree
Q26	it was very original and fun
Q27	Gameplay and graphics and i suppose music and sounds are key elements to a good game
Q28	i enjoy playing games where i can play with or against friends because you are playing with real people rather then playing by yourself against a computer

8.3.33 Participant 33

Timestamp	April 25, 2009, 9:01 am
Q1	Everyday
Q2	Until tetris on facebook, I was just an average player that had played it on occasion.
Q3	Extremely good fun
Q4	Yes, every day.
Q5	Competing with friends.
Q6	Goal is to improve your personal scores and friends' scores.
Q7	Agree
Q8	Quite challenging
Q9	Strongly Agree
Q10	Strongly Agree
Q10.1	
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	Moderately.
Q15	Strongly Agree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Strongly Agree
Q21	Strongly Agree
Q22	Strongly Agree
Q22.1	Playing the same game over and over I have had the tetris effect--playing tetris in my mind.
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	It's so simple.
Q27	
Q28	

8.3.34 Participant 34

Timestamp	April 26, 2009, 9:40 pm
Q1	Everyday
Q2	At least 100 hours worth, possible up in the 300-500 hour range
Q3	Good fun
Q4	Daily, at least.
Q5	The unending nature, simplicity, the infinite possibility of beating your old score
Q6	There is no goal
Q7	Neither Agree or Disagree
Q8	Somewhat challenging
Q9	Agree
Q10	Agree
Q10.1	
Q11	Strongly Agree
Q12	Disagree
Q13	Strongly Agree
Q14	Very
Q15	Strongly Agree
Q16	Strongly Agree
Q17	Neither Agree or Disagree
Q18	Neither Agree or Disagree
Q19	Agree
Q20	Disagree
Q21	Strongly Agree
Q22	Strongly Agree
Q22.1	My personality is conducive to addiction
Q23	Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	Simplicity
Q27	No idea
Q28	Nothing

8.3.35 Participant 35

Timestamp	April 27, 2009, 12:30 am
Q1	Everyday
Q2	I started playing about a year ago on Tetris DS and then migrated to tetrisfriends on facebook. Because of all the hackers, I went to blockles.
Q3	Extremely good fun
Q4	I play an average of 2-3 hours a day
Q5	The way that everything fits together. It is also an effective way for me to challenge myself by beating my own score.
Q6	To go as fast as you can and beat everyone you know
Q7	Strongly Agree
Q8	Very challenging
Q9	Strongly Agree
Q10	Neither Agree or Disagree
Q10.1	
Q11	Strongly Agree
Q12	Disagree
Q13	Agree
Q14	Very successful
Q15	Agree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Agree
Q19	Agree
Q20	Disagree
Q21	Strongly Agree
Q22	Strongly Agree
Q22.1	Is very fun
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	I don't believe that Tetris is popular
Q27	It depends on the person. For me personally, I enjoy wasting time.
Q28	Nothing. I love it!

8.3.36 Participant 36

Timestamp	April 27, 2009, 10:44 am
Q1	Every other day
Q2	I have been playing Tetris since I was a little kid (I'm now 31).
Q3	Extremely good fun
Q4	I play it almost every day. It's addicting!
Q5	Racing others for the fastest time.
Q6	No particular goal other than beating my best time or coming in first during a sprint.
Q7	Strongly Agree
Q8	Quite challenging
Q9	Neither Agree or Disagree
Q10	Agree
Q10.1	
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Agree
Q14	Pretty successful.
Q15	Agree
Q16	Agree
Q17	Agree
Q18	Agree
Q19	Agree
Q20	Agree
Q21	Agree
Q22	Strongly Agree
Q22.1	The game is a challenge yet never loses it's "fun" factor.
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Agree
Q26	It's a fun way to exercise the brain.
Q27	I They can be relaxing, fun, a challenge and sometimes provide social interaction.
Q28	If the system specs and game option would stop limiting the player's skill.

8.3.37 Participant 37

Timestamp	April 28, 2009, 8:28 am
Q1	Everyday
Q2	been playing since i first got a gameboy ... 20 yrs?
Q3	Extremely good fun
Q4	i will always play ... got to beat stephen zingaro's score (he filled in yr Q as well!)
Q5	the score!
Q6	to be top of the leaderboard ... which i will never do
Q7	Strongly Agree
Q8	Very challenging
Q9	Strongly Agree
Q10	Strongly Agree
Q10.1	
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	fairly - somewhere in the top 10%, i think
Q15	Strongly Agree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Strongly Agree
Q21	Agree
Q22	Strongly Agree
Q22.1	why? because i just got to improve my scores
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	it is easy to learn and - when you get to a certain level - very challenging (challenging?). just 1 sec off a speed score or 2000 points more in a scoring game is a yipee
Q27	speed
Q28	not sure there is anything. um. er. nope - cannot think of anything!

8.3.38 Participant 38

Timestamp	April 29, 2009, 2:08 am
Q1	Everyday
Q2	a couple of months
Q3	Extremely good fun
Q4	yes, all the time. at least, when i get a chance
Q5	the competition; trying to beat your best score.
Q6	Achieving and surpassing a goal. It motivates you to do better the next time
Q7	Strongly Agree
Q8	Quite challenging
Q9	Strongly Agree
Q10	Strongly Agree
Q10.1	
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	Very successful. I usually beat my highest score.
Q15	Strongly Agree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Strongly Agree
Q21	Strongly Agree
Q22	Strongly Agree
Q22.1	Its because you are in the moment and you still want to achieve better.
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Agree
Q26	It is interactive as well as keeps you thinking, attentive, and on your feet
Q27	lets you into another world
Q28	the competition

8.3.39 Participant 39

Timestamp	April 30, 2009, 4:02 pm
Q1	Everyday other day
Q2	I've played Tetris for around 7 years.
Q3	Good fun
Q4	It depends. When I start playing it, I play it almost daily for a while, could be one month, and then I don't play it for another one to six months, and then I begin playing frequently again.
Q5	I believe the idea of finding ways of surpassing your own score and that it is based on your strategy skills.
Q6	Well, in Tetris Friends, you have various goals, that could be reach level 15, score the most points in 2 minutes, etc., but in the Classic Tetris I believe the goal is to either surpass your previous scores, or to surpass your friends' scores.
Q7	Neither Agree or Disagree
Q8	Very challenging
Q9	Agree
Q10	Agree
Q10.1	
Q11	Agree
Q12	Agree
Q13	Agree
Q14	Very successful
Q15	Agree
Q16	Agree
Q17	Agree
Q18	Disagree
Q19	Agree
Q20	Agree
Q21	Neither Agree or Disagree
Q22	Agree
Q22.1	The game contains bright colors, and even though you are playing the same game over and over again, you are not doing the same thing and it does not depend wholly on you whether you get to achieve a great score or not, since the tetriminos that are given to you are never given in the same order twice. It is very addictive since you never really have to "end" the game and do the same thing all over again if you want to play it again. It is always changing.
Q23	Neither Agree or Disagree
Q24	Yes
Q24.1	Yes
Q25	Agree
Q26	Because it's a classic, it's addictive, and everyone can play it.
Q27	The fact that you can play them without really making any effort and the fact that, thanks to the internet, you can compete against other people which is connected with the humans' desire of feeling important.
Q28	Nothing, really

8.3.40 Participant 40

Timestamp	April 30, 2009, 5:00 pm
Q1	Once a month
Q2	Few years on tetrinet.org and tetrifast.org, both of which provide an excellent client for competitive players all over the internet.
Q3	Extremely good fun
Q4	I would play the game again, maybe once a month.
Q5	How speed is rewarded by clearing lines faster, and also having a sense on the "optimal" place to play a piece after considering the upcoming piece(s).
Q6	Being better than one's opponents at the game.
Q7	Neither Agree or Disagree
Q8	Very challenging
Q9	Neither Agree or Disagree
Q10	Strongly Agree
Q10.1	
Q11	Strongly Agree
Q12	Strongly Agree
Q13	Strongly Agree
Q14	I would rank myself in the top 10,000 players in the world, not just those on facebook.
Q15	Strongly Agree
Q16	Strongly Agree
Q17	Strongly Agree
Q18	Strongly Agree
Q19	Strongly Agree
Q20	Strongly Agree
Q21	Strongly Disagree
Q22	Strongly Agree
Q22.1	The uniqueness of the game made it appealing. The simplicity made it easy-to-learn from the start. The seemingly limitless room for improvement in the form of increased speed and placement of pieces adds to the replayability of tetris.
Q23	Strongly Agree
Q24	Yes
Q24.1	Yes
Q25	Strongly Agree
Q26	Anyone can play it and think they are good at it, until they play others.
Q27	The amount of thinking involved.
Q28	More game modes that are interesting and not imbalanced.