A Self-Inducing Interactive Animation Technology Based on Analyzing Five-Element Attributes of One's Name and Birth Date Numerology for Enhancing School Counseling Quality

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Abstract: This paper proposes a self-inducing interactive animation technology based on one's name and birth date numerology to increase school counseling quality. The proposed technology contains three main subjects including analyzing one's name and birth date, creating the inducing cards, and constructing the interactive user interfaces. An individual's name and birth date are used to analyze his/her inherent personal features which are interpreted into different five-element characteristics, named Gold, Wood, Water, Fire and Soil. This study also utilizes 52 inducing cards as the referred materials in designing animation scenes. In addition, the interactive user interfaces are built by using Visual Basic programming codes and Unity game-based development tool. According to the experimental results, the proposed technology can help the counseling personnel to be students' triggers, inducers and motivators instead of educators and commentators. Conclusively, this study can inspire students' thinking, expression and interactive capabilities as well as help students to understand their self-consciousness and make own choice after clarifying their thoughts.

1. Introduction

In order to enhance the elite education, ministry of education in Taiwan has started to promote widespread education by extending the compulsory education to high school level since 2013. Meanwhile, ministry of education requires the schools located at cities and counties setting up the student consultative center to provide professional and effective counseling services [1]. This policy implies that the schools' consultants, especially for mentors and tutors, play a very important role because they have to provide an individual adaptive counseling support timely and effectively, specifically for the students who have counseling needs and high care needs. Generally, evaluating the effectiveness of a counseling service includes three aspects. They are: (1) increasing the communication capabilities between counseling people and students; (2) understanding whether the students' behavior problem is improved or their learning achievement is enhanced; and (3) developing new adapting capabilities and solving problems effectively. In addition, the training staff usually reviews the effectiveness of consultative guidance as the basis of revising the counseling strategies or making the improvements. Therefore, this paper applies psychology, one's name and birth date numerology, and interactive animation technology to increase the counseling quality as well as ensure the

counseling contents are matched with the accuracy and objectiveness.

The name and Bazi (birth date) numerology have been used as the references for evaluating an individual's personality, inherent personal features, and interpersonal relationships based on the probability and statistical analysis of cumulative case studies for thousands of years. The literatures [2-6] are the studies related to the interpersonal relationship and personality traits. The study [2] claimed that one's name and their personality are correlated and "personality" is an important factor in the human resource management. The literature [3] utilized Fo-Guang University students as the study objects to explore the connection between the name numerology and an individual's interpersonal relationships. This study applies the five elements of the name numerology in analyzing an individual's interpersonal relationships and evaluating the affinity accuracy of the interpersonal relationship between consultants and students. The reference [4] applied the characteristics of the five elements into analyzing a child's personality to enhance children's autonomy and concentration capabilities. The research [5] described the significance and the characteristics of German's name. The paper [6] investigated whether patients have different magnetic fields or they can be stimulated by calling their names. In addition, the author also proposed the related research which

applied information technology in analyzing five-element attributes of one's name for enhancing school counseling quality [7].

In the reviewing some references related to the one's birth date called Bazi numerology, the literatures [8-12] have studied Bazi numerology of inherent five-element characteristics including Gold, Wood, Water, Fire and Soil in the influence on an individual personality trait. In the reference [8], the feasibility and the impact of using Bazi numerology and five-element characteristics to study personality traits and interpersonal relationships are discussed. As for the reference [9], the special features of the five-element characteristics have been adopted to enhance the concentration and autonomy of the children. The reference [10] applied the numerology and astrology in the current technical education. The study [11] utilized the psychological phenomenon of the numerology inquirer to explore a person's inner world. The literature [12] is the author's previous research which applied birth date in human resource management for an educational institution.

UNITY has many powerful built-in features such as materials and shader, rendering, lighting, physics, animations, audio/video, the advanced graphics support and powerful UI-development tools. The literatures [13-14] are the references applying UNITY tool in the educational field. The study [13] applied UNITY to create effective tools for learning computer science and engineering. The research [14] designed a multi-player adventure education game with motion sensing. In this research, players could immerse in the collaborative activities and all the collaborative gaming processes would be recorded by computers and observations would be conducted by researchers to understand participants' social behaviors. The literatures [15-16] are the references applying UNITY tool in the game development. The study [15] proposed a game called Seeker to improve users' cognitive abilities which are challenged for resource management and decision making while solving different puzzles. The research [16] designed a 2D game which requested players to predict the actions according to players' memory. That means a player needs to remember the role's regulation and predict the next move, which could allow users to have brainstorming while playing a game.

Nowadays, although there has been a lot of specific animation game applications developed, the game-based educational entertainment applications are not yet widely used in school consultative environment. By considering an individual with his/her own uniqueness and different growth background, a counseling staff needs a variety of considerations while making an objective assessment. Therefore, this study continues the authors' previous research [17] on decoding one's name and birth date (Bazi) into different five-element characteristics to discover one's inherent personal features and their interpersonal relationships. The proposed approach also utilizes 52 inducing cards coupled with a serial of questions for consultative counselors or teachers in the student counseling process. These 52 cards are used as the primary materials in designing animation scenes by applying UNITY 3D software to create interactive user interfaces to be an interactive- and interesting-oriented consultative learning tool.

In the following, the material and methods of the proposed self-inducing interactive animation technology are described in Section 2. The experimental results are shown in Section 3. Finally, the conclusions are summarized in Section 4.

2. Material and Methods

Figure 1 shows the schematic diagram of matching the appropriate counseling personnel to the student, which is based on analyzing one's name and Bazi into the form of five-element characteristics. As shown in Figure 1, the counseling department is required to input the student's name and their Bazi respectively. The system decodes the inputs and then outputs the results of the decoded person's name and Bazi as well as the result of the matched appropriate counseling personnel to the student. Table 1 shows the activations, contradictions, and similarities of five-element characteristics. In this study, a user can utilize the contradictions, activations and similarities of five-element characteristics to figure out one's personality and their interpersonal relationships. The principles of decoding the name and Bazi as well as analyzing the five-element characteristics of the name and Bazi are described as follows.

Table 1. The activations, contradictions and similarities of five-element characteristics.

| Relationships of Five-Elements		Characteristics
Activations	Wood - Fire Fire - Soil Soil - Gold Gold - Water Water - Wood	An individual would be glad to pay their enthusiasm or help people.
Contradictions	Wood - Soil Soil - Water Water - Fire Fire - Gold Gold - Wood	An individual would give people pressure or burden potentially.
Similarities	Wood - Wood Fire - Fire Soil - Soil Gold - Gold Water - Water	An individual would respect for people and get together in harmony.
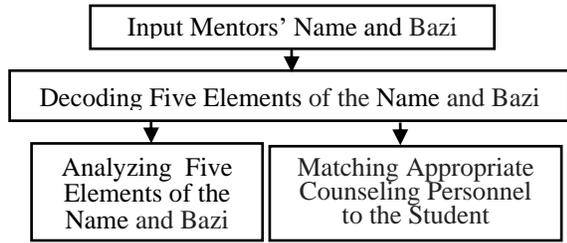
Figure 1. Schematic diagram of matching the appropriate counseling personnel to the student.

2.1. Decoding Five Elements of the Name

Figure 2 shows the results of analyzing five elements of the name called "Wu, Ching-Fan" in Chinese. In Figure 2, the name of "Wu, Ching-Fan" can be subdivided into four divisions: Elder, Personal, Family, and Friend divisions, where Personal division means "I", Wu, Ching-Fan himself. A counselor can figure out his personality by knowing the five-element attribute of the personal division. In addition, a counselor can find out his interpersonal relationship among elders, families, and friends by understanding the five-element attributes of the Elder, Family, and Friend divisions, respectively.
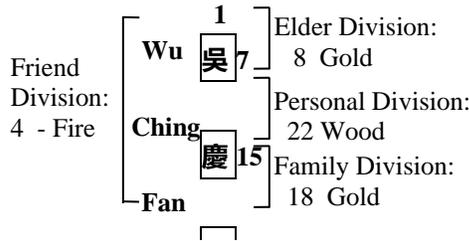
Figure 2. The results of analyzing the five elements of the name called "Wu Ching Fan" in Chinese.

2.2. Decoding Five Elements of the Bazi

Bazi, representing a person's birth date, is composed of four columns including year, month, day, and time columns in which each column includes a pair of the word in the format of (Character, Zodiac Animal). Generally, the character of the Bazi includes ten attributes named A, B, C, D, E, F, G, H, I, and J. The zodiac animals of the Bazi are such as Rat, Ox, Tiger, Rabbit, Dragon, Snake, Horse, Goat, Monkey, Rooster, Dog, and Pig, respectively. Table 2 gives the relationship between the character and the zodiac animal. As shown in Table 2, each character and zodiac animal has their five-element attributes named Wood, Fire, Soil, Gold, and Water specifically. For examples, A and B are the five elements of the Wood; C and D are the five elements of the Fire; E and F are the five elements of the Soil, G and H are the five elements of the Gold; and I and J are the five elements of the Water. As for the zodiac animals, tiger and rabbit are the five elements of the Wood; snake and horse are the five elements of the Fire; ox, dragon, goat, and dog are the five elements of the Soil; monkey and rooster are the five elements of the Gold; and rat and pig are the five elements of the Water.

Table 2. The relationship between the character and the zodiac animal.

Characters	Zodiac Animals
Wood (A, B)	Tiger, Rabbit
Fire (C, D)	Snake, Horse
Soil (E,F,G,H)	Ox, Dragon, Goat, Dog
Gold (I,J)	Monkey, Rooste
Water (K,L)	Rat, Pig

2.3. Matching the Appropriate Counseling Personnel to the Student

In order to help the students adapting the people, things, classmates and school environment comfortably as well as to enhance the efficiency of counseling works, finding the appropriate counseling personnel to a student is very important. In the following, two conditions for finding better candidates and matching the appropriate counseling personnel to a student are introduced. An example is also given and analyzed specifically.

(1) Searching the counselor's five-element attributes is in the condition of activation or similarity based on the attributes of "personal and family" and "personal and elder" divisions.

(2) Searching the counselor's and the student's five-element attributes of the personal division are in the condition of activation or similarity.

<Example> A student's five-element attribute of the personal division is "Wood". The possible candidate of a counselor can be matched as described in the following scenarios.

(1) If the counselor's personal division is "Fire", the student can coherent with the counselor and agree the counselor's suggestions.

(2) If the counselor's personal division is "Wood", the relationship of the counselor and the student are friends.

(3) If the counselor's personal division is "Water", the counselor would actively care about the student and help the student sincerely.

(4) If the counselor's personal division is "Soil" or "Gold", this scenario should be avoided because they are easy in the condition of contradictions and conflicts to each other.

2.4 Interactive Animation System

Figure 3 illustrates the block diagram of the proposed interactive animation system, which includes four parts: planning interactive user interface, picturing the 52 idiom/allusion cards, designing animation scenes, and programming interactive controls. Figure 4 shows the user interface interaction structure of selecting different idiom/allusion cards coupled with their corresponding explanations. Each part of the proposed interactive animation system is described in the following.
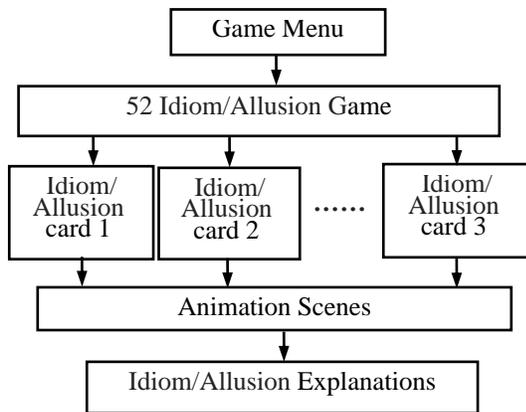
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┌─────────────────┐
│   Game Menu     │
└─────────────────┘
         │
┌─────────────────────────┐
│ 52 Idiom/Allusion Game  │
└─────────────────────────┘
    │        │         │
┌────────┐┌────────┐┌────────┐
│Idiom/  ││Idiom/  ││Idiom/  │
│Allusion││Allusion││Allusion│
│card 1  ││card 2  ││card 3  │
└────────┘└────────┘└────────┘
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┌─────────────────────────┐
│    Animation Scenes     │
└─────────────────────────┘
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┌─────────────────────────┐
│Idiom/Allusion Explanations│
└─────────────────────────┘
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Figure 3. Block diagram of the proposed interactive animation system.

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┌──────────┐
│   User   │
└──────────┘
      │
┌────────────────────────┐
│ Interactive Interfaces │
└────────────────────────┘
      │
┌────────────────────────┐
│ 52 idiom/allusion cards│
└────────────────────────┘
      │
┌──────────────────────────────────────┐
│Card 1:Potential: Find it and treasure│
│       it.                            │
│Card 2:Solitude: Being alone to see   │
│       one's consciousness.           │
│Card 3:Drop: It is the time to drop it│
│       and let it go.                 │
│Card 4:Hope: Dreams would come true   │
│       with hope.                     │
│Card 5:Wisdom: Make the right choices │
│       and decisions.                 │
└──────────────────────────────────────┘
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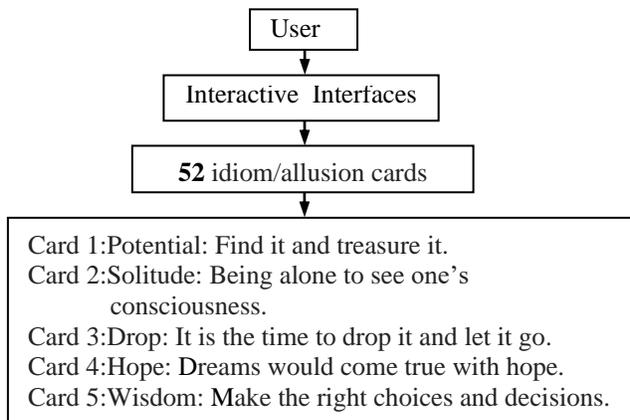
Figure 4. User interface interaction structure of different idiom/allusion cards.

2.4.1. Planning Interactive User Interface

In this paper, three layers of interactive user interfaces are planned. First layer of interactive user interface is the system main menu which is the start menu allowing a user accessing the proposed game-based self-inducing interactive animation school counseling system. In the system main menu, there are some basic options for users to choose, such as starting a new game, calculating the score, choosing different idiom/allusion cards, and the exit of the system. In the second layer of the interactive user interface, there are 52 options of the idiom/allusion game menu and a user can choose different cards via this submenu. As for the third layer, a user can find each card's animation game and its explanation.

2.4.2. Picturing the 52 Idiom/Allusion Cards

Figure 5 gives four examples of idiom/allusion cards' pictures. They symbolize potential, solitude, drop, and hope. As shown in Figure 5(a), card 1 indicates "Potential" which means everyone has his/her own potential and one should find it and treasure it. Figure 5 (b) named card 2 denotes "Solitude" which means that being alone can see his/her own more clearly and clarify one's consciousness. Figure 5 (c) named card 3 represents "Drop" which means that it is the time to drop it and let it go. Figure 5 (d) named card 4 shows "Hope" which means that when you see the hope, your dream would come true soon.

(a) Card 1 - Potential   (b) Card 2 - Solitude

(c) Card 3 - Drop   (d) Card 4 - Hope

Figure 5. Four typical idiom/allusion cards' pictures.

2.4.3. Designing the Animation Scenes

The design of the animation scenes are based on the original 52 idiom/allusion cards' pictures. According to the indications of 52 cards, different animation scenes are designed. In this study, the design of the control panel of the interactive animation mainly uses C# programming language to execute mouse, keyboard, and roles driven such as switching different menus and scenes as well as activating different animation scenes, visual art and sound effects. For instance, the animation scene for the "Drop" card is something falling down from a person's hand. The animation scene for the "The fact is in front of us" card can be designed by blinking one's eyes and flipping four coins, where the words "forty" and "fact" are homophones in Chinese.

3. Results

In this study, the proposed self-inducing interactive animation technology based on one's name and birth date numerology for school counseling system is implemented by using UNITY 3D software to create interactive user interface, installing the 52 idiom/allusion cards, designing the animation scenes, and programming the interactive controls through C# programming language.

In this paper, one's inherent personal features is presented as different five-element characteristics, named Gold, Wood, Water, Fire and Soil. The proposed technology is implemented by using Visual Basic programming language to create interactive user friendly interface for the name and Bazi analysis. The proposed approach mainly applies the activations, contradictions, and similarities among different five-element characteristics in the name and Bazi for an individual. Figure 6 is the analytical interface which decodes the five-element attributes of one's Chinese name, including "Elder", "Personal", "Family" and "Friend" divisions, respectively. Figure 7 is the input interface for a user to key in his/her Bazi in English; Figure 8 is the output interface which shows one's personality attributes and the suggestions on matching the appropriate counseling personnel to the student. Figure 9 shows the layout of the game-based main menu which includes four options: new game, high scores, options, and exit. Figure 10 shows the animation design for the card -- "The fact is in front of us" in which the words "forty" and "fact" are homophones in Chinese. According to the experimental results, this study provides a user friendly interface; a user can access the system easily; the output is also easy to understand. The proposed approach allows users adding/designing a new idiom/allusion card conveniently, thereby supporting the characteristics of flexibility and adaptability.

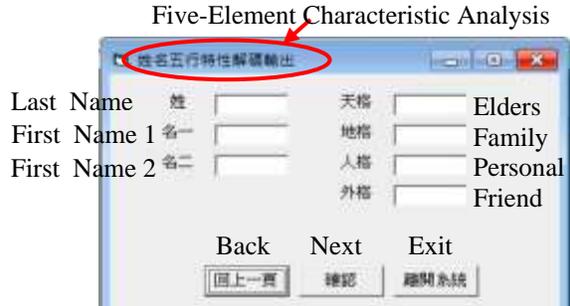Five-Element Characteristic Analysis

Figure 6. Decoding five elements of one's name.

Figure 7. Input interface for the user key in the Bazi.

Figure 8. Matching the appropriate counseling personnel to the student.
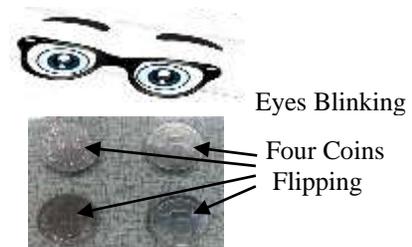

Figure 9 . Layout of game-based main menu.

Figure 10. Animation design for the card – "The fact is in front of us".

4. Conclusions

This paper proposes a self-inducing interactive animation technology with the name and birth date numerology to increase school counseling quality. The proposed technology contains three main subjects including analyzing one's name and birth date, creating the inducing cards, and constructing the interactive user interfaces. According to the implementing results, the method proposed in this paper can provide three contributions. Firstly, it can be interactive- and interesting-oriented consultative learning tool. Secondly, it can help the counseling personnel to be students' triggers, inducers and motivators instead of educators and commentators. Thirdly, it can help students to understand their self-consciousness and make own choice after clarifying their thoughts. Conclusively, the proposed approach could support an educational counseling department to find appropriate counseling personnel to assist the students efficiently, solve the problem timely, and evaluate the circumstance and situation correctively.

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References

1. The national elementary school counseling reference manual. Ministry of Education, 2013. ISBN: 978-986-03-9677-5.
2. Chyu S. Y. A study of relationship between secret code of Chinese names and human relations. Master Thesis, Institute of Holistic Life Study, Fo Guang University, Taiwan, June 2007.
3. Qiu S. Y. The mystery of names and interpersonal relationships: A case study of the relationship between teachers and students at Fo Guang University. Master Thesis, Institute of Biology, Fo Guang University, Taiwan, June 2007.
4. Chung M. H. Fire child, water child : How understanding the five types of ADHD can help you improve your child's self-esteem and attention. Teacher Chang Culture Press, 2013.
5. Hanks P. Personal names. Berlin-Brandenburg Academy of Sciences, Berlin, Germany and Brandeis University, Waltham, MA, USA, 2006; 299-311.
6. Höller Y., Kronbichler M., Bergmann J., Crone S., Schmid E. V., Golaszewski S., and Ladurner G. Inter-individual variability of oscillatory responses to subject's own name - A single-subject analysis. International Journal of Psychophysiology, 2011; (80), 227-235.
7. Hsu C. M. and Chao C. Y. Applying information technology in analyzing five-element attributes of one's name for enhancing school counseling quality. International Conference on e-Commerce, e-Administration, e-Society e-Education and e-Technology, Kuala Lumpur, Malaysia, Apr. 2015.
8. Jiang Y. L. Five lines character measurement of personality characteristics of the feasibility study. Master Thesis, Information Management Institute, National University of Applied Sciences, June 2009.
9. Stephen K. W. Fire child, water Children from the five elements to help children with ADHD focus and autonomy. Teacher Chang Culture, 2013.
10. Yang Y. G. Numerology industry and technology education. Master Thesis, Institute of Higher-Order Public Policy, National Sun Yat-sen University, Taiwan, 2007.
11. Lee H. G. Cultural and spiritual existence - the psychological phenomenon of numerology inquirer. Master Thesis, Institute of Life and Death, Nan-Hwa University, Taiwan, 2005.
12. Hsu C. M. and Chao C. Y. Applying birthdate in human resource management for an educational institution. The International Conference on Smart Science (ICSS), Huis Ten Bosch, Kyushu, Japan, Apr. 2017.
13. Christel M. G. et al. RumbleBlocks: Teaching science concepts to young children through a unity game. The 17th International Conference on Computer Games(CGAMES), 2012; 162-166.
14. Hsu Y. J., Lin C. H., and Shih J. L. Developing multi-player digital adventure education game with motion sensing technologies. IEEE 13th International Conference on Advanced Learning Technologies, 2013; 207-209.
15. Toma I., Dascalu M., and Matu S. T. Seeker: A serious game for improving cognitive abilities. International Conference on Networking in Education and Research, 2015; 73-79.
16. Jiyuan L. and Wenfeng H. Development of puzzle game for iOS platform based on unity 3D. The 3nd International Conference on Applied Computing and Information Technology/ International Conference on Computational Science and Intelligence, 2015; 468-473.
17. Hsu C. M. and Chao C. Y. An interactive animation based self-inducing information technology for school counseling system. International Conference on Applied System Innovation (ICASI), Osaka, Japan, May 2015.

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