Research Article

Analysis of Brand Personality Components in Higher Education with Emphasis on Technology

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Abstract

Background: Concerning increased competition among higher education institutions, there is a need for a proper lever such as brand personality. On the other hand, to maintain the sustainable advantageous competition, it is recommended to consider and use information and communication technology in the brand.

Objectives: The present study aimed to provide a brand personality model in higher education with emphasis on technology in 2017 - 2018.

Methods: Brand personality themes in higher education in the first (qualitative) phase of this study were identified using a thematic analysis. The statistical population was all articles and books listed on international databases in the field of "manager's competencies in the future", which were published between 1997 and 2017. In total, 69 articles and books were chosen. In the second (quantitative) phase of the study, 32 comprehensive universities with 10,840 faculty members were used as the statistical population. Then, using Kerjesian and Morgan tables, 373 faculty members were chosen using non-random convenience sampling as the sample. For analysis of the data, a confirmatory factor analysis method and Smart PLS software were used.

Results: In this study, 10 organizing themes and 30 basic themes were identified. A 123-item researcher-made questionnaire was developed based on the identified themes. The reliability of the questionnaire was confirmed using Cornbrash's alpha of higher than 0.80. The high reliability showed high internal correlations between basic themes. Also, based on the results of factor analysis for validating the model, the theme of information technology user with a factor of 0.72 had a high explanatory effect. According to all calculated high factor loads, the research model showed high reliability.

Conclusions: The achieved results can be used as a model of brand personality to create a unique market. Moreover, they can increase market share, especially in the field of information technology, in today's competitive business in research and academic centers.

Keywords: Brand, Brand Personality, Higher Education, Information Technology

1. Background

In recent years, universities have confronted different crises. One of the most practical strategies in crises is brand-making. Brand-making is a strategy to create distinction in universities. Not only competition but also making a lot of efforts in order to conform college students' mental perceptions to universities is done. Therefore, the brand character is introduced with the purposes of knowing the brand and customers' personality features, producing conformity between them in markets, and finally creating particular validity for business (1, 2). The university commercial name shows generalities and feelings that beneficiaries of a particular university have in relation to the university. The university brand shows the concrete deduction from competency, strength, popularity, proactive virtue orientation, emotionalism, sincerity, and modern and updated technologies that people imagine in their minds while hearing the university's name. For instance, a college student imagines factors such as faculty members and staff, facilities, and the development of information technology in his/her mind when s/he chooses a university. In fact, the brand personality in higher education is the ability of the university to draw attention and conquer beneficiaries and it provides the possibility for educational institutes that show themselves differently from other institutes of higher educa-

tion ([2]). It is noticeable that the characteristic of information technology in brand personality causes information transference, development of problem-solving skills, critical thinking, information management skill, and communication/negotiation skills between college students. Therefore, the university brand personality by technology can improve the ways of knowledge storing and learning methods and also develop new educational strategies and eliminate the obstacles. The university brand personality based on information and communication technology is always learner-centered, interactional, collaborative, and flexible through active learning strategies to increase motivation and cooperation ([3]).

Therefore, brand creation, given the particular feature of information technology, is an effective strategy to maintain the training organizations unique, which are in align with students' perceptions. It is a mental symbol or emotional value derived from students' personal opinions of the academic brand ([4]).

Moreover, previous research has shown that there is a coherent relationship between human being and brand features. Opoku et al. ([5]) concluded that Aaker's five brand personality dimensions including competence, sincerity, excitement, ruggedness, and sophistication are identified in online schools. Rauschnabel et al. recognize brand personality dimensions as prestige, sincerity, appeal, liveliness, conscientiousness, and cosmopolitan ([2]). Rutter et al. determined brand personality as a powerful basis to distinguish between universities and help in marketing ground to understand the university's place.

Thus, using up-to-date technology improves the university's brand personality and has a great role to attract students and leads to future progress and success in the fields of education and research.

2. Objectives

Therefore, research to determine and explain effective factors and constituent components of university's brand personality is useful and necessary.

3. Methods

This study was conducted using a mixed-method approach based on sequential exploratory strategy. First, a qualitative phase was done using thematic analysis based on inductive approach. The thematic analysis is a technique to recognize, analyze, and report the patterns in qualitative data. It is also a method for separating the texts

and searching for their clear intellectual justifications and implied concepts ([6]). Therefore, in this method, the basic theme shows an important point in the text and by unifying them, an organizing theme is created. The organizing theme is the interface of the global theme and the basic theme. The global theme is in the center of the themes' network.

In total, we selected 63 articles and theses found in international databases in the field of brand personality in higher education published in international publishers including Elsevier, Emerald, Science Direct, and Springer between 1997 and 2017. The themes showed the concept of brand personality. The result of this section included 30 basic themes and 10 organizing themes, which were used for developing a researcher-made questionnaire. The validity was confirmed by experts who were knowledgeable in thematic analysis and brand personality. In addition, not only because of the basic, organizing and global themes that were chosen via studying the background of research and the goals of research and resources but also because of the descriptive themes and no manipulation by researcher cased high accuracy and integrity (validity). In the first level, the themes were derived from articles by the researcher while in the second level, the themes related to the questions were re-recognized and derived by experts. Then, by comparing these two levels, the reliability was estimated at 0.81 via Holistic coefficient.

In the second (quantitative) phase, a researcher-made questionnaire with 180 questions was prepared based on the results of the qualitative phase of the study and its validity was authenticated by 15 experts in management and brand fields. By using the content validity ratio (CVR) table, the questions with CVR < 0.49 were omitted. Therefore, the researcher-made questionnaire decreased to 123 questions. Then, 32 comprehensive universities were chosen by random sampling in five geographical zones (North, South, East, West, and Center). The universities had 10,840 faculty members. Using Krejcie and Morgan sample size table, 373 faculty members with more than five-year experience were selected voluntary via non-random convenience sampling. The reliability of the questionnaire was confirmed using Cronbach's alpha of higher than 0.81 that showed high internal correlations between the basic themes. In order to analyze the data, the confirmatory factor analysis method and convergent and audit indicators were used. The analysis of quantitative data was done using statistical package for the social sciences (SPSS) version 23 and Smart PLS3.2.6 software (Table 1). Then, the model was arranged by the thematic network.

Table 1. Factor Loads of Organizing Themes, Basic Themes, and Global Themes of Brand Personality

Organizing Theme	Factor Load	Crises Value	Basic Theme	Factor Load	Crises Value	P
Morality-oriental	0.75	24.91	F1-1	0.90	78.33	0.001
			F2-2	0.79	21.68	0.001
Sincere	0.89	65.95	F2-1	0.93	86.81	0.001
			F2-2	0.87	37.29	0.001
			F2-3	0.57	12.32	0.001
			F2-4	0.42	7.91	0.001
Excitement orientation	0.79	30.54	F3-1	0.80	26.07	0.001
			F3-2	0.74	21.38	0.001
			F3-3	0.81	28.45	0.001
Competence orientation	0.81	33.41	F4-1	0.77	74.72	0.001
			F4-2	0.92	98.34	0.001
Sophisticated	0.75	23.50	F5-1	0.74	19.69	0.001
			F5-2	0.89	56.57	0.001
			F5-3	0.74	21.06	0.001
Ruggedness	0.72	21.90	F6-1	0.85	39.69	0.001
			F6-2	0.89	63.41	0.001
Sensitive	0.75	26.18	F7-1	0.87	46.46	0.001
			F7-2	0.85	42.75	0.001
Active	0.90	54.05	F8-1	0.74	21.82	0.001
			F8-2	0.80	29.83	0.001
			F8-3	0.77	22.71	0.001
			F8-4	0.75	22.58	0.001
			F8-5	0.70	17.54	0.001
Leadership	0.87	60.89	F9-1	0.80	29.55	0.001
			F9-2	0.87	28.26	0.001
			F9-3	0.72	20.94	0.001
			F9-4	0.79	22.04	0.001
			F9-5	0.64	11.73	0.001
Popular	0.78	26.20	F10-1	0.93	89.34	0.001
			F10-2	0.89	45.32	0.001

4. Results

To answer the main research question (what are components of brand personality in higher education), after initial coding, the basic themes that indicated important points in texts were first identified and then, the organizing themes were created by combining the basic themes.

Therefore, the global theme of brand personality construction was placed in the center of the theme network. Eventually, 10 organizing themes and 30 basic themes were identified. Some of the organizing and basic themes effective in shaping the brand personality are given in Table 2.

In order to validate the model, a factor analysis method was used. The model of brand personality compiled a

Table 2. Brand Personality Organizing Themes

Row	Basic Themes	Text
		(A): Sincerity Organizing Theme
1 (A)	Good-natured	The benefits of honesty in the brand include reducing costs, improving service quality, creating trust, matching the words and actions, and placing the reality as the base
2 (A)	Emotional-intellectual	Brand personality has strong support and emotion network. It pays attention to human communication and cooperation to create loyalty to the brand.
		(B): Excitement Orientation Organizing Theme
1 (B)	Tendency to innovation	Educational centers with brand personality rely on opportunities and innovative achievements. Progress in all aspects is the basis for such centers and organizations. Technology can speed up the innovation procedure.
2 (B)	Uniqueness	Applying brand personality in higher education enables the organizations to build a brand distinction. The use of new technologies can distinguish an organization from other universities.
3 (B)	Futuristic spirit	Being up-to-date and using modern equipment, planning the future, and proper ideas are the excitement dimensions in brand personality.
		(C): Competence Orientation Organizing Theme
1 (C)	Creating trust	Brand personality points to emotional capability and this concept affects marketing activities. Making trust and creating a space to share knowledge have a direct relationship with brand competence.
2 (C)	Value for knowledge	Creating a trustworthy environment and paying attention to intellectuality and integrity dimensions affect brand preference satisfaction.
		(D): Ruggedness Organizing Theme
1 (D)	Distinct ability	A university with brand personality supports the challenges, encourages risk-taking, and accepts constructive criticisms of the staff. It uses challenging situations as opportunities to improve and develop skills. It has a real commitment to achieve the university's missions and goals.
2 (D)	Belief in pragmatism	Brand personality helps the brand name to replace simple and reductionist thinking through strategic thinking. Having strategic thinking and relying on abilities and multidimensional skills in dealing with issues help achieve desired results and develop a unique brand in the competitive market.
		(E): Active Organizing Theme
1 (E)	Developmental spirit	A university with brand personality supports the challenges, encourages risk-taking, accepts constructive criticisms of the staff and has the courage to improve the university. Such a university has staff that is ready to participate in university's missions. Also, it uses up-to-date technology and gains experience form failures. A university with brand personality uses challenging situations as opportunities to change and develop skills and abilities.
2 (E)	Interaction spirit	Organizations with brand personality can affect customer perceptions more than gained by gradual and sustainable methods of communication, cooperation and sharing experiences.
3 (E)	Belief in sharing knowledge	Universality and international cooperation have an unbreakable connection with each other. Students view universities as a platform that in addition to creating employment opportunities can provide international interactions, cooperation, and access to resources. These are possible with the use of up-to-date technology in universities.
		(F): Leadership Organizing Theme
1 (F)	Unique in creativity	A university that uses high-technology is more successful in a competitive market. Such university guarantees appropriate and consistent measures by producing knowledge, new ideas and creative spirit.
2 (F)	Belief in mind agility	A successful university can achieve and find more cooperation and collaborations with using technology. It has more profitability and is quicker in adapting to changes. It also collaborates with the inside and outside of the organization to accomplish common goals with them.
3 (F)	Technology user	Students usually choose universities with a brand that attracts suitable social reactions and emotional dimension. Also, universities that have up-to-date technologies and follow today's technology changes are usually chosen the most by students.
4 (F)	Worldwide research	The merits of educational organizations with brand personality are contingency leadership in schools, global and international awareness, scientific exchanges and transnational collaborations and social responsibilities.

second-order equation. The results of the model evaluation including factor loads of the concepts are reported in Figure 1 and Table 1.

To answer the second question of research "What is the validity of the research model", we referred to factor loads, probability values, and statistical significance in the above table. As can be seen, the factor loads of global and organizing themes of brand personality are desirable. In other words, the correlation of the global theme with organizing and basic themes was estimated high; as a result, the tool had the required factor validity.
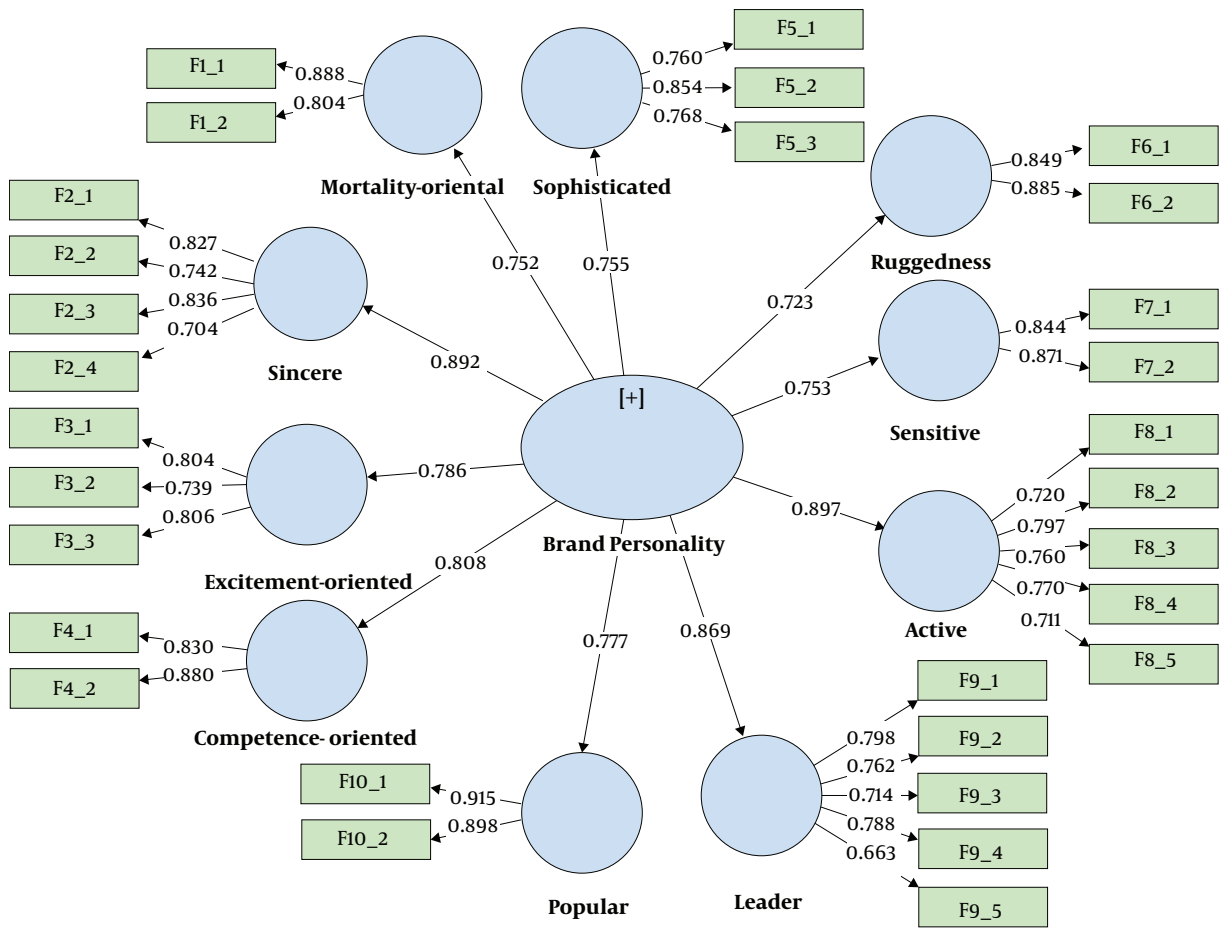
Figure 1. Brand personality model

5. Discussion

According to the recognizing themes in this study, students are the main clientele of universities; thus, it is crucial to maintain the relationship of the students with universities. The growing number of universities and high competition to attract the students necessitate universities to survive by attracting new students and encouraging former students to continue education. On the other hand, there are important factors that emphasize university brand personality, such as the development of information technology, the development of higher education, especially in grades of complementary education and the varieties of courses, the changes in educational approaches, specialized studies in the field of future studies in all scientific subjects, information explosion, information pollution and the essential of suitable resources, increased information resources, more consideration of es-

sentiality of public education and long-life learning, and the public needs for the fast technology development. Therefore, this study contributes to the business literature development and the concept of brand personality in higher education according to information and communication technology. The results showed that all the themes in the brand personality model had high factor loads and were confirmed.

According to the results, the "honest" factor emerged with a path coefficient of 0.89. The personality conformity with honesty means the creation of a good and sincere relationship between students and universities that is based on justice, and emotion and is relation-oriented and good-natured. This result conforms to the results of previous studies (2, 4, 7-9). Sincerity creates faithful and prejudice, makes a positive advertisement for the university, introduces the university by the students, and encour-

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5

ages them to use the university educational services with commitment. Therefore, naming university brand personality to the sincerity characteristic can strengthen the interaction between members. Sharing knowledge on the sincerity, the cooperation and commitment shows the importance and need for using update technology.

The basic theme of the technology user with a path coefficient of 0.72 had a strong correlation with the leadership factor and it is a strong index for its measure. Also, P < 0.05 for the basic theme of this factor shows a meaningful relationship of each theme with the main factor that is higher than itself. In fact, knowledge production in the information era is an activity that is dependent on technology due to technology power and information development. The entrance of the new connection technology in education has changed the nature of the university learning-teaching process. In order to achieve the complete goals of development, the education characteristic in universities' brand personality is based on modern, standard methods and scientific principles and the use of expert professors and having modern facilities and equipment. Education based on communication and information technology in a university, which has the brand personality, facilitates interaction, active learning, and cooperation and increases motivation in commitment and the achievement of common perspectives by flexible characteristics. Creating new ideas and perspectives makes a new path for university development and growth. Making plentiful commitment between university members causes fundamental changes and revolution in universities for acquiring essential preparations and abilities in a new way to conquer higher summits of the function. These findings conform to the results of previous studies (2, 10-14).

The mind agility with a path coefficient of 0.97 had a strong correlation with the leadership factor. A university with a worthy brand personality provides the situation of intelligent and optimal use of resources, facilities, and opportunities to achieve purposes. Fast recognizing and controlling the weaknesses and threats increase system efficiency and effectiveness. Indeed, the mental agility will be needed and using information technology has a very important role in providing the essential information in decision-making for agile leaders in the brand to answer unpredictable and unbalanced requests quickly. The flexibility and agility can decrease the present process and promote services. These findings conform to previous results (2, 4, 9, 12).

One of the other important and noticeable character-

istics of the university brand personality is the foresight based on information technology. Foresight is a systematic effort for considering a long-term future in different sorts of knowledge, information technology, and environmental changes with the purpose of recognizing new technologies and determining the areas that are more important in the future. The foresight importance in acquiring knowledge is to form the future in a conscious way that protects the organization against heavy storms of enormous changes and advances. It conforms to the results of previous studies (7, 11-13). The role of higher education as one of the most important social systems in using information is essential and the current use of the new technology in universities and its challenges must be known for future use. The use of information technology in research activities, participating in national and foreign seminars and translating books are important in brand personality. When information and communication technology is the basis of education in the brand personality, it will cause better results.

In conclusion, it can be said that today, universities deal with multiple issues that can affect their performances. For this reason, higher education institutions can provide a solution to this problem with more emphasis on branding. Higher education centers can use our research findings in choosing the target market and developing their branding strategies. Among the notable issues for universities are information technology and communication, which are the great features in brand personality and will make differences in higher education.

Footnotes

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