

## Review of Hierarchy-of-Effects (Hoe) Models and Higher Education Advertising in Malaysia

**Azizul Yadi Yaakop\***

School of Maritime Business and Management, Universiti Malaysia Terengganu, Malaysia

**Nomahaza Mahadi**

International Business School, Universiti Teknologi Malaysia, Malaysia

**Zailin Zainal Ariffin**

Faculty of Defence Studies and Management, National Defence University of Malaysia, Malaysia

**Siti Sarah Omar**

University Tun Hussein Onn Malaysia, Malaysia

### Abstract

The most enduring and controversial models of advertising effectiveness are the Hierarchy-of-effects (HOE) models, which are of particular interest to researchers in marketing and advertising. This paper gives emphasis on the selection of these hierarchical models in the context of Higher Education Institutions (HEIs) in Malaysia. The notion of raising awareness and interest, followed by desire and action is very seductive in its simplicity, and provides a clear focus for Higher Education advertising. In light of the criticisms of these models, this conceptual paper compares and contrasts the more important advertising models and reflects on the relevance of these simple models in relations to the advertising focus in HEIs. The authors conclude that HOE models fail to adequately represent the impact of the advertising process on the complex emotional/rational decision-making that takes place when choosing HEIs. Advertising's impact on the choice process is far more complex: developing brand desire through brand image is an important purpose of advertising. The authors are also in agreement with the notion of an essential understanding of other marketing areas such as brand identity, meaning and reputation of higher education institutions through a variety of qualitative and quantitative methods to communicate effectively with the stakeholders.

**Keywords:** Advertising effectiveness; Hierarchy-of-effect models; Marketing communication; Brand awareness; Higher education advertising.



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### 1. Introduction

In the context of increasing competition for home-based and overseas students, higher educational institutions (HEIs) now recognize that they need to market themselves in a climate of not only at national level, but especially in the international competition. In fact, the international student market plays a very important role for HEIs in generating revenue for the higher education sector (Arambewela *et al.*, 2006). Like any other part of the world, Malaysian HEIs is facing the same challenges in the presence of this globalization and highly competitive market place. Most HEIs are attempting to be unique in the homogenous market, strategizing vigilantly in creating and supporting the demand for both domestic and international education. Malaysian HEIs need to streamline their advertising strategies for internationalization, which simultaneously promote their high performing factors aggressively to potential international students (Padlee and Yaakop, 2013; Wagner and Fard, 2009). For example International Islamic University Malaysia (IIUM) is regarded one of the Islamic universities reputed in the country as well as in the global front, particularly among the Muslim countries and Universiti Malaysia Terengganu (UMT) is known for its niche in marine science and aquatic resources.

A substantial proportion of marketing budgets in universities is spent on advertising in various forms, but there is still relatively little recent research in this field Hemsley-Brown and Oplatka (2006). A study of Higher Education advertising effectiveness over 25 years ago (Goldgehn, 1990) found advertising was accepted in HEI but there was little consistency; Jugenheimer (1995) concludes that colleges and universities generally advertise themselves ineffectively because of poor planning, resistance, inexperience, and lack of strategic marketing planning. Later work – although still over 15 years old (Kittle, 2000; Klassen, 2000) suggests that institutions rely on advertising for awareness rising, and image enhancement – a view reiterated by Lauer (2008) who argues that advertising helps establish institutional presence and can also help attract attention and clarify identity.

Other conceptual papers on advertising in HEI include a paper by Gibbs (2007), which challenges the use of advertising by universities, and argues that such advertising works against the goals of autonomous, liberal education. However, it is acknowledged that there are authors who challenge whether university education may now even be considered a liberal education Fields (2003). Nonetheless, Gibbs (2007) points out that he is unaware of any

study that looks at the content of the advertising used by universities to induce positive responses” Gibbs (2007). In contrast, a paper by Lauer (2008) in the same journal issue highlights the effectiveness of advertising in HE.

What are the implications for universities – are they following models that have long since been found to be too simplistic and ineffective? What new insights have researchers recently put forward which could benefit HE sector advertising efforts? Debates about advertising effectiveness have been around for decades and involve major parties from sales and marketing; creative advertising agencies; and scholarly academics including those in favor of the benefits that advertising can bring to universities Lauer (2008) and those who oppose it Gibbs (2007). The stair-like framework of the hierarchical model was first theorized more than 100 years ago by St. Elmo Lewis aiming at achieving fullest sales force effectiveness (Strong, 1925). About five decades later the term ‘hierarchy of effects’ was introduced in response to the earlier advertising effectiveness work better known as purchase sequence, proposed by Lavidge and Steiner in 1961.

Marketing scholars and practitioners continue to debate whether there is a logical and rational explanation of marketing communication processes and it has always been appealing to represent this process as a simple hierarchical model. One key issue is that most of the hierarchical models work on the basis that something is *done* to the consumer – Stimulus-Response – rather than something the consumer might use in the process of making decisions – Information Processing (Huey, 1999). Nonetheless, academics continue to debate the relevance and validity of such models and their simple appeal has been strong enough to continue to influence advertising practice. The notion of raising awareness and interest, followed by desire and action is very seductive in its simplicity, and provides a clear focus for the efforts of practitioners in marketing, especially in Higher Education (where marketing is less-well established, compared with business and commercial marketing). Even in a very recent study by Jan and Ammari (2016), the likelihood of Malaysian university students to choose a particular university is described in a linear sequence via online advertisement.

In light of the criticisms of these models, this conceptual paper will compare and contrast the more important advertising models which represent turning points in the development of advertising research, and reflect on the ways these simple models shape the advertising process in Higher Education. The discussion focuses on the neuroscience approach in the search for a more valid advertising model, and highlights the importance of brand desire in the model, as a key antecedent to action. In the next section the authors discuss some of the key developments of the hierarchy of effects models, applying these to HEI settings, and analyze some of the criticisms, which have been identified.

## 2. Hierarchical Models

From the introduction of the AIDA (Attention, Interest, Desire, and Action) model and the Learn-Feel-Do model (including DAGMAR) (Fill, 2003) most of the literature on sales force and marketing management fully endorses the idea of the ‘attention-to-action-to-satisfaction’ sequential framework in their practices. To some extent this is apparent in the HE context where websites, newspaper inserts and outdoor advertising aim to raise awareness and gain attention for the universities that feature in the ads. Nevertheless, there are also a few writers in the field of psychology who disagree with the hierarchical effects concept and claim that advertising behavior is complex and human reactions cannot be measured in a sequential format such as the AIDA framework (Devoe, 1956; Poffenberger, 1925). On the basis that human nature is complex and that a more comprehensive model was essential – from 1960’s onwards marketing practitioners began thinking about how advertising impacts on buyers in a more enduring and effective way and focused on purchase sequence (more often referred to as the process of choice and decision-making in the HE market) (Foskett and Hemsley-Brown, 2001; Hesketh and Knight, 1999; Moogan *et al.*, 1999). According to Hemsley-Brown and Oplatka (2006) early studies in HE marketing concentrated on the impact on choice of marketing communications and advertising (Gatfield *et al.*, 1999; Hesketh and Knight, 1999; Mortimer, 1997). In a more recent study, Padlee and Yaakop (2013) suggested that HEIs should provide student testimonials about the positive aspects of their institutions, hence in effect, they would serve as product endorsers, which to some extent relies on the notion of a linear relationship between these events.

This communication channel could prove a very valuable line of distribution of information, which could influence the opinion of potential students and their families. Such strategic action is likely to result in a more direct impact on overall satisfaction,

### 2.1. Purchase Sequence

Purchase sequence is the first reference model developed which was based on the traditional AIDA hierarchy-of-effects (HOE) model. The authors, Lavidge and Steiner (1961) hold that advertising is not just to achieve sales targets but affects the consumer in a lasting way: advertising is not just about achieving student recruitment targets but has an impact on the way the university is perceived in the longer term. This model is based on the assumption that student-consumers pass from one state of behavior to another before arriving at a final choice to attend the institution. The sequential linear model consists of a series of six steps towards the final choice i.e. awareness, knowledge, liking, preference, conviction and purchase (Robertson, 1968). Ideally, in this context, the advertisers need to ‘push’ the consumers from one stage to another to ultimately achieve desired purchase action or choice. So institutions through their advertising would ensure that students become aware of the institution, before gaining more information based on arousal of interest, and would then begin to like the institution and prefer it above others: this would lead to a conviction that it’s the best choice and eventually to choosing the institution above others – a straightforward, linear process of making a choice.

Clearly [Lavidge and Steiner \(1961\)](#) acknowledged that not all consumers go through the same linear process from the very beginning, and consumers vary, and go through the stages at different rates. However, the authors still claim that consumers are *passive* and can be directed from one state of behavior to another through a simple linear sequence. In the HE context, this model does not take account of the overlaps between stages or the need for students to reach any of the stages in a different order – for example, the need to like the institution before finding out more information or that awareness, information and liking can be simultaneous.

## 2.2. The ATR Model

The *weak* theory of advertising (i.e. that the role of advertising is merely reinforcing habitual behaviours) is less relevant to the HE sector - but is based on the claim that advertising has an impact in all three stages of awareness, trial, and reinforcement (ATR) in general ([Ehrenberg, 1974](#)). The model highlights the importance of reinforcing repeat behavior because through experience consumers develop not only repetitive habits, or loyalty, but build a brand consideration set or a repertoire of the brand. The model works particularly well for services, and for fast moving consumer goods such as groceries – but is perhaps less relevant for HE choices which can often be an on-off decision.

The ATR model is viewed differently from the rest of the HOE models because of its *reinforcement* concept that views advertising as a medium for reinforcing known facts which are the customers' habitual satisfied feelings – unlike the strong theory supporters that argue that advertising has a role in persuading consumers to behave in a certain way. However, this approach does not differentiate the ATR model from other HOE models in terms of its sequential steps, the 'one-step-is-prerequisite-to-the-other' type of model, even though, it does occasionally allow trial step to precede awareness. Still, psychologically, this model treats consumers as though they are being 'pushed' from one state of mind to another and it does not regard human behavior and mental processes as being complex. Thus the ATR model of advertising is more appropriate for fast moving consumer goods than for a high involvement decision such as choosing a university. But, the notion of the linear sequence remains: advertising is assumed to be effective in pursuing the consumer from one stage – awareness, to the next stage, trialing the service, to the final stage of repeat consumption. The notion of open days with the increasing offer of taster sessions, mini-lectures and other experiential events, are largely based on the ATR model of advertising – even though repeat behaviours and loyalty, are not as beneficial or likely in HE as in other service contexts.

## 2.3. The Model of Domains of Effect

In an effort to overcome the limitations of sequential framework, [Moriarty \(1983\)](#) introduced the model of domains of effect where the author clustered advertising effects in separate areas of distinct disciplines and looked at their interrelationship and interactions. Even though the basis of her arguments is still hierarchical, in the sense that one process precedes another, she affirms that the groupings are rather interdependent and often operate concurrently on some level. This model does make some allowance therefore, for students combining the interest element of the model with the search for further information, and the possibility that these two stages are simultaneous: the ad is not the only way that universities can gain attention from choosers, and desire and interest can be linked – the ad itself can also act as a prompt after the interest has been secured. The process therefore, is overlapping and interrelated during the decision-making process in HE choice.

The model provides an alternative and more accurate way of looking at advertising effectiveness by utilizing the concept of a continuum of effects in the predetermined five subclasses of effect domains that operate simultaneously. However, predictable schematic outcomes do not really represent reality, and on close inspection of the effects, a sequential pattern seems to prevail in the model. Furthermore, the author overlooks other reasons why some people arrive at purchase action (or choice of university) despite not having seen any advertisement in the early stage of the process.

## 2.4. The Elaboration-Likelihood Model

A central route (argument-related) and a peripheral route (non argument-related) were identified by the authors of the Elaboration-Likelihood Model to illustrate customer attitude change ([Petty and Cacioppo, 1983](#); [Petty and Wegener, 1999](#)). The authors claim that the probability that the central route or peripheral route is exercised depends on the customer's motivation level and/or his or her ability as to assess the true merit of the advertised brand ([Scholten, 1996](#)). Thus, the model was presented in a continuum of customer probability depending on their motivation and ability to assess the true merit of the brand being advertised. A great deal of thought is required for central route processes and these are likely to take place when the advertising is highly elaborate and complex, however, attitudes formed in conditions of high elaboration are considered to be stronger – they are argument related. It would seem that the focus of HE advertising has perhaps been more focused on central route processes with high elaboration because of the longer term nature of such decisions. Attitudes need to be stronger and student customers are assumed to be capable of weighing up arguments. Pressure or expectations that HE decisions might be less elaborate, and more peripheral – i.e. non-argument related, are attractive but perhaps less likely to result in firm choices in the long run. But how far to universities use this approach i.e. "the experts are always right" idea, which appears to provide students with quick and easy decisions using the peripheral route?

This model compared with HOE model predecessors largely overcomes the limitations of complex cognitive processes and focuses particularly on the persuasion aspects – the two possible approaches. However, we agree with [Scholten \(1996\)](#) critique of the general limitation of this model especially in terms of the ambiguity of the continuum that shows the level of motivation, and the ability of the consumer to assess the true merit of brand being

advertised. Surely both approaches can work simultaneously? Expert opinions can be presented alongside the persuasive arguments for attending one institution rather than another, or studying one course rather than another? The model has some contribution to make to choices about the advertising of HE, but the model seems limited.

### 2.5. FCB Grid

Known as a comprehensive communication model and said to be ‘visually coherent’ with an ‘intriguing matrix’, the FCB Grid consists of a combination of high-low involvement of certain product categories with the way the brain processes information whether the response vary depending upon the thinking or feeling communication task involved (Vaughn, 1986).

Figure-1. FCB Grid

	Think (Rational)	Feel (Emotional)
High Involvement	<p>QUADRANT 1 Informative (Economic) Rational Decision e.g. New Car</p>	<p>QUADRANT 2 Feel (Affective) Psychological Decision e.g. Designer handbag</p>
Low Involvement	<p>QUADRANT 3 Low Importance (Habitual) Responsive decision e.g. USB stick</p>	<p>QUADRANT 4 Low importance (Satisfaction) Social Decision e.g. canned drink</p>

Source: Chang (2006)

Four sequences of consumer purchase behavior are identified in four quadrants of the grid, based on high and low involvement in the purchase decision and rational or emotional decision making. Quadrant 1 summarizes decisions that are high involvement and rational – decisions about HE and university are often assumed or expected to be in this quadrant, although some authors have challenged this notion (Foskett and Hemsley-Brown, 2001; Hemsley-Brown, 1999). Nonetheless, the emotional decision-making approach has more recently been used successfully for expensive and prestige products and services, and there is every reason for arguing that perhaps more emotional decisions are made about HE when choosing highly prestigious institutions such as Harvard, Yale, Oxford, Cambridge, Imperial or MIT; and more rational, economic decisions are made when fees and cost of living are taken into account e.g. international post graduate study.

However, using the FCB Grid, if AIDA theory is put into practice, the emphasis still focuses on the sequential customer-learning process – but with a variation. A distinction is made in the model, between product categorization – high involvement and low involvement purchases – and emotional versus rational processing of product information. This “visually coherent and intriguing matrix” Chang (2006) rationalizes the logical interpretation of the sequences, and it opens the matter for further discussion – for example are decisions about prestigious universities different from decisions about local institutions, where costs are more important than prestige? The grid was well received when it was developed theoretically however; there is still no empirical study to support the claims.

### 2.6. Advertising Response Modeling

In the midst of this ongoing challenge to model the effective ways of assessing advertising effectiveness Mehta (1994) puts forward arguments – not to defend the model – but to ‘integrate’ the new perspectives, and to produce a better overall framework that she claims could increase advertising effectiveness. The framework is called Advertising Response Modeling (ARM).

Although two empirical studies were conducted to provide evidence about the workability of this framework, the author still did not manage to explain how consumers process information nor does she illustrate how complex the information processing can be. However, the framework aims to integrate a number of theories into a well-constructed logical model and most importantly helps in developing a practical strategy for creating advertisements that match the predetermined marketing objectives. Matching the objectives to the practical advertising strategy is a key achievement for this model. For example, the measurement of an advertising campaign for a university business school needs to be measure based on the clear and focused objectives set for the campaign – overall benefits of advertising in general continue to be difficult to measure (Hall, 2002) but measuring the focused and specific objectives set for a campaign to target managers in engineering for a part-time MBA program, can be measured to some extent through enquiries, applications, offers, recruitment and so on.

### 2.7. Advertising Double Helix

Variations in the HOE models continue to be developed and in 1999, a further model of advertising was constructed in response to criticisms of the hierarchical concept of effects of advertising. The Advertising Double

Helix Model is three dimensional; nonlinear with a ‘DNA-like’ helix structure that shows an interaction between message, medium and recipient on both spiral strands around a continuous time period (Huey, 1999). The AIDA model or any other HOE models’ order sequence was put in random order in both spiral strands of media and message to reflect the irregularity of sequence that customers will experience of advertising in reality. What the Helix model helps to infer about advertising is that advertising is non-linear, multidimensional and achieves its affect over time within the constraints of the message and the media (Huey, 1999) – this largely contradicts the notion of a hierarchical model whereby each stage must take place before the next. For example, in the context of below-the-line marketing communications this does find some support. For example a student is likely to have heard of an institution in many contexts, in addition to or prior to coming in contact with advertising. Publicity, media coverage and PR are likely to have raised awareness and drawn attention to a named university (particularly universities high in the league tables); the desire to make a choice in favor of a chosen university can often run ahead of the interest and information stage normally stimulated or prompted by any advertising. As Huey (1999) argues, advertising can be part of the whole consumer decision-making process and does not occur in isolation, in a strict AIDA order.

## 2.8. The MAC Model

The MAC model (Memory dominates Affect which in turn dominates Cognition) Ambler (1998) is based on a comparison between two major conflicting areas of research on advertising effectiveness: persuasion or *strong* theory and reinforcement or *weak* theory, and complements the work of neuroscientists. Strong and weak theories are claimed to be able to describe particular situations, but most of the time they fail because innovation often requires the rules to be changed Ambler (2000). Strong theory underestimates the significance of experience (memory) but weak theory underestimates the importance feelings (Affect) Ambler (2000). No model can wholly explain how advertising works, however in general, he argues that there must be a model that can best explain the phenomena, and he claims that the MAC model which then dominates cognition) describes the process better than any of the linear-sequential models.

The MAC model was developed because of the inadequacy of important elements in both strong and weak theories i.e. the effect of memory and affect respectively. Criticism of the hierarchy of effects models is that advertising effectiveness cannot be tested along the linear hierarchical pathway, whereas the MAC model reflects the view of neuroscience in terms of how the brain processes information – i.e. that the stages happen virtually simultaneously and not progressive. Memory, emotion and engagement with information or knowledge can occur at the same time. When viewing an advertisement for a university the emotional reaction to the design of the ad and the images used, takes place at the same time as the information elements are processed, and the memory is triggered about the context, previous knowledge and associations. These happen simultaneously.

## 3. Limitations of the Models for HE Advertising

Despite the appeal of hierarchical models, the concept of a hierarchy in many aspects has limitations both theoretically and practically. First, in general all hierarchical effects models have a final aim of impacting directly on sales or in the case of HE, on recruitment or at the very least applications. However, there is no empirical evidence to demonstrate that these models are valid in terms of purchase action, even though marketers have been using them to determine advertising effectiveness by measuring pre- and post- advertising exposure (Hall, 2002). This is somewhat naïve, since advertising is unlikely to be the only factor responsible for sales. In addition to extraneous variables, other marketing factors such as long standing reputation (e.g. Harvard, Oxford or Cambridge) innovation, (e.g. Open University UK) unique selling points (e.g. Loughborough UK for Sports and Exercise Science programs) wide distribution (e.g. University of Phoenix, US) contribute as much as advertising does to purchase action (Colley, 1961).

Second, what is noticeable is that hierarchy models make assumptions that consumers are similarly predictable beings, equal in respect of the formation of attitudes and processing of information. Consumers do often process information in certain expected ways but consumers’ minds and lifestyles are different in so many ways especially in terms of attitudes, perspectives and judgments – political, social and economic. Therefore a single predictive model of this type seems to be an unrealistic ideal.

Third, in the basic and well-known hierarchical model – AIDA, a consumer is moved from one state of behavior to another by a single exposure to an advertisement (Weilbacher, 2001). A consumer may be able to go through a change in mental processes through exposure to an advertisement but he or she is more likely to pass through the process when he or she has a *connection* with the advertised brand. This might be achieved if there is an interaction or relationship between a consumer and a brand through at least a few encounters of the advertised brand. For example, a student would perhaps need to have seen an advertisement in a magazine or on a billboard, checked the website, and perhaps followed up with a visit, or make contact with someone who attended the university. To date, the published models fail to take account of consumers’ multiple exposure to various advertisements and encounters before purchase action takes place (Weilbacher, 2001).

Fourth, a further weakness of the model is the notion that advertising can control the brand perception in a controlled media message. Usually a combination of marketing efforts contribute to sales in addition to the advertisements – the marketing promotion activities, may include a variety of events such as publicity and public relations, sponsorship, promotional exhibitions, launching ceremonies and open days. Research shows that these events have a tremendous impact on recruitment (Hemsley-Brown and Kolsaker-Jacob, 2008) to a greater degree than advertising alone. Malaysian HEIs must explore the possibility of gaining competitive advantage not only through marketing effort as Sadiq Sohail *et al.* (2003) argued that competitive advantage could be achieved through

an effective campaign of quality certification, which has long been adopted by IKIP College in Malaysia. Yet, these effects seem to be excluded from most of the hierarchical effects models – they are focused on advertising alone.

Finally, some of the most important discoveries in the area of neuroscience and cognitive psychology are changing the way people view advertising effectiveness. Effective advertising is about viewers recalling partial memories and developing new and fresh memories about the advertised product – and this notion is clearly of central importance to advertising exposure. Neuroscience converges with effective advertising by looking at how people actually feel and think, and considers *emotions* and *brand relationship building*.

First, Cramphorn (2006) argues that marketers need to understand how their advertising can positively affect consumers' brand-feeling because it is principally the basis for successful advertisements. This new integrative model of advertising helps to provide answers to questions about the ineffectiveness of HOE models. Cramphorn (2006) claims that Attention, Brand-News (Interest), Brand-Feeling (Desire) and Purchase Intention (PI) are integrative in nature – overlapping, taking place at the same time and affect one another. The results of empirical research further show that Brand-Feeling is the most significant variable for increased Purchase Intention (PI) indicating that people have a greater intention to purchase if they have built strong relationships with a specific brand. Advertisements, therefore, should contribute to building strong brand feeling alongside other promotional activities – providing technical information about courses is not enough.

Second he argues that Brand Experience (BE) is a catalyst for strengthening Attention, Brand News (Interest) and Brand-Feeling (Desire) to an even higher rate of Purchase Intention (PI). This model implicitly asserts and applies the concept of relationship management and supports the fact that there is a strong bond between the brand and the customers, which is the key to successful advertising. As far as neuroscience is concerned, the model combines the notion supported by the scientist that feelings influence or offer us a consideration set and provide the boundary of what is acceptable by our conscious thoughts.

### 3.1. In Conclusion the Authors Suggest That

1. Developing brand feeling through brand experience is an important purpose of advertising – the emotional elements are more important than the functional in terms of brand building.

2. We should challenge the notion of advertising as a simple linear sequence and acknowledge the complexity and integrated nature of the process.

3. There are a wide variety of perceptions and experiences which bring students to the university and only some of these are through the marketing communications and in particular the advertising the university carries out. Ho and Hung (2008) argued that although HEIs increasingly realized the importance of having sound marketing strategies to stay competitive, this has often obscured the fact that marketing should be based on customer needs (i.e. market segmentation and positioning techniques), with better efforts made to fulfill these needs. In the context of Malaysian HEIs, niche area of HEIs should always be the focus.

4. Pressure to pursue non-argument/non-rational approaches to advertising need to be treated with caution because research shows that they are less effective for longer term decisions.

5. However persuasive the arguments for using emotional advertising might be, the most impact can be gained through the advertising of prestige and top rank brands, rather than mainstream brands where the functional benefits need to be highlighted.

6. Advertisements influence only part of the whole consumer behavior process – the measurement of advertising effectiveness can therefore only be achieved in a limited way.

7. HOE models fail to adequately represent the complex emotional/rational decision-making that takes place when choosing universities. Only the simple link between exposure to the advertisement and the response to that stimulus can be measured. Its impact on the wider choice process is far more complex.

The authors therefore, agree with Gibbs (2007) that empirical evidence is needed to demonstrate the impact of advertising in a HEI context and such research could shed much-needed light upon the way that emotional/rational approaches used by different types of university in international settings impact on students' choices as well as by different types of methodologies to explore higher education branding in terms of identity, meaning, image and reputation (Hemsley-Brown *et al.*, 2016).

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