Cultural dimensions of dental students in a Thai university

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ABSTRACT

This cross-sectional descriptive survey determined cultural dimensions among dental students. First, questionnaires based on Hofstede's cultural dimension theory were distributed to all accessible students at the Faculty of Dentistry, Mahidol University, of whom 265 participants responded. In general, they showed high scores in uncertainty avoidance (UA), femininity and collectivism and focused on the long-term goal. However, they had low power distance (PD). In addition, the construct validity was evaluated using principal components factor analysis. The results of the 10-item questionnaire offered insights into the most relevant aspects of three culture dimensions: UA, male-female (MF) and long-term versus short-term goals (LS). These components were revealed logically with UA as the main component explaining 24% of the culture dimension, followed by MF and LS. To reinforce the mainstream learning theories, this study advocates that lessons with high learning barriers required instructional design and should be well-structured with a humanistic approach to address the high UA and femininity. Lessons must also respect the traditions and norms (long-term orientation). In conclusion, Hofstede's cultural dimension revealed the dental students' learning style. Further, educators are encouraged to embrace cultural traits as humanistic and heuristic learning.

Keywords: dental education; Hofstede's concept; culture dimension; learning theories; empathy

1. INTRODUCTION

Dental education integrates foundational knowledge of ethics and humanity into patient care. However, teaching dental students to be well aware of these issues is rather complicated (Carey et al., 2010). Therefore, their educators should foster students' understanding of appropriate moral principles with extreme care. In addition to being attentive to the patients' anxiety of clinical encounters and illness, they also have to truly comprehend individual students' learning behavior, cognitive ability, and constructivist diversity to determine how to best conceptualize and apply the knowledge into practice (Chambers, 1993; Cook et al., 2019; Ertmer and Newby, 2013; Jordan et al., 2008; Martimianakis et al., 2020).

Employee training in international business firms reflects a similar pattern to competency-based dental students' training (Chambers, 1993; Itaya et al., 2008; Morrow et al., 2013). Cultural trait differences due to nationality were found hinder this training. For example,

each European country demonstrates a different level of power distance (PD), i.e., the distance between the superior and the subordinate. While Slovakian and Russian employees want the boss to describe the work details, Austrian and Danish workers prefer their boss to consult with them. To evaluate this difference in work culture owing to nationality, Hofstede has created a cultural dimension model (Hofstede, 2001; Hofstede et al., 2010). Amid debates on the influence of cultural traits on education, it was shown that these traits influenced the learning technique, both intuitively and deliberately (Hofstede, 1986). Furthermore, the effect of these cultural differences on education, especially in the learning strategies of eastern and western dental students was emphasized (Chuenjitwongsa et al., 2018a). To facilitate a good student learning outcome, an emphasis was placed on the understanding of the regional and global cultural traits and differences (Betancourt, 2003). Furthermore, especially when present internet distance education effortlessly allows an amalgamation of various cultures, the issue of national cultural differences may require even more attention (Sangkapreecha and Sangkapreecha, 2012; Wu, 2006). As such, modern-day students may seek a comfortable learning environment in which their beliefs are well aligned with the teachers' philosophy and principles. Bridging the gap between teachers and students may aid the student learning process through both online and offline communication (Niratpattanasai, 2004; Preece and Ghozati, 2001).

Hofstede (2001) established an example of research on work-related cultural dimensions by dividing the social dimension into parts. These are briefly explained in Hofstede's questionnaire as follows:

1) PD or power inequality: This represents the level of control. A high value means the acceptance of the hierarchy of the organization.

2) Uncertainty avoidance (UA): This demonstrates the need to avoid all probable risks. A high value indicates strict rules and plans in order to avoid all possible uncertainties.

3) Masculinity versus femininity (MF): Dimensions of the male and female represent the values of sexual dimorphism behavior in the organization. For example, a high value means that subjects may tend to focus more on reasoning and competition (masculinity) than maintaining harmony in workplace relationship (femininity).

4) Collectivism versus individualism (CI): This represents an individual's working style. A high value demonstrates the tendency to work alone and focus more on personal success.

5) Long-term orientation versus short-term orientation (LS): This dimension focuses on distant versus near goals. It shows the view towards work attitude. A high value shows a likelihood to work to achieve the long-term goal.

"Dimensionalizing Cultures: The Hofstede Model in Context" describes the effect of cultural differences at work with great success (Hofstede, 2011). Moreover, Hofstede has long evaluated these work-related cultural traits and differences in several national contexts and suggested their use for education (Hofstede, 1986). Later, a sixth dimension was added to the model: indulgence versus restraint (IVR) (Minkov, 2007; Hofstede et al., 2010). IVR focuses more on individual happiness and well-being. This sixth dimension has not yet been widely adopted. This may be due to the fact that there is less data

collected from a narrower range of countries in contrast with previous dimensions. Moreover, it is possibly due to the equivocality of aiming at a happiness investigation.

This model has been used by other studies in fields of medicine and dentistry (Betancourt, 2003; Chuenjitwongsa et al., 2018a; Itaya et al., 2008; Morrow et al., 2013). However, the Hofstede values survey model (VSM) was designed specifically for international culture comparison; it was not intended for comparing between groups. The model of Dorfman and Howell (1988) is simpler and shows no confusing reverse-scaled item with evidence of comparable reliability to Hofstede's VSM. As suggested by many authors, this study followed Dorfman and Howell's model (Fernandez et al., 1997; Sarhan et al., 2015; Wu, 2006). In addition, to precisely evaluate the cultural value, the continual renewal of the cultural dimension evaluation seems justifiable.

Moreover, the free movement policy of the European Union (EU) allows unrestricted European students to move freely between EU member nations (European Higher Education Area, 2018) and has been supported by the Erasmus Mundus Joint Master's Degree Program (EMJMDS) (Chuenjitwongsa et al., 2018b) and the European Community Action Scheme for the Mobility of University Students (ERASMUS) (ERASMUS, 2014). Besides Europe, to allow and standardize this university student interchange, the Association of South East Asian Nations (ASEAN) has established a form of educational quality assurance: Asian University Network Quality Assurance (AUN-QA) (AUN-QA, 2016; Chuenjitwongsa, et al., 2017). However, the study of cultural traits, especially in Asia and in the field of dentistry, is still extremely limited. This research, therefore, aimed to fill the knowledge gap to determine the cultural dimensions of students at the Faculty of Dentistry, Mahidol University, Thailand. Ultimately, it aimed to empower educators with cultural diversity insights.

2. MATERIALS AND METHODS

This study was a cross-sectional descriptive survey using the questionnaire based on standard Hofstede theory (See Table 1) at the Faculty of Dentistry, Mahidol University. This faculty was originally named the "Faculty of Dentistry Phaya Thai", before the dental school seceded to promote the development of the Thai dental education system following the first faculty of dentistry located on Henri Dunant Street (Faculty of Dentistry, Mahidol University, 2018; Faculty of Dentistry, Chulalongkorn University, 2017). In 1968, it was established as part of the University of Medical Sciences. In 1969, His Majesty King Bhumibol Adulyadej The Great graciously renamed the University as Mahidol University. Since 2014, the Mahidol International Dental School (MIDS) launched an international program for undergraduates (MIDS, 2018). There are also numerous Thai and international Ph.D. and master's degree programs, as well as clinical training courses. At this stage, there are more than 600 dental treatment units and more than 600 Thai undergraduate dental students.

Before the survey, the content validity of the questionnaire was evaluated and improved based on recommendations of the Ethical Review Committee for Human Research, Institutional Review Board, Faculty of Dentistry and Faculty of Pharmacy, Mahidol University.

The recommendation was to precisely translate the original questionnaire into Thai. A few revisions were made to ascertain the correctness of the translation and ease participants' understanding of all items. A pilot study was conducted by distributing the revised, adjusted questionnaire to 50 participants. Based on the results of the pilot study, the questionnaire was once more amended by the appointed reviewing committees who were proficient in both Thai and English. Finally, all survey procedures were re-testified and approved by this same review board and the certificate was issued (MU-DT/PY-IRB 2016/DT080).

From a total of 668 students, 561 students' email addresses were retrieved from the university student center. In detail, the questionnaire was divided into two main sections. The first part consisted of demographic information of the participants and was sent to all accessible email addresses. Purposive sampling was conducted to achieve the most homogeneous sample. Questions in this part also aimed to exclude all contributing variation factors. International students, Thai students with one or more non-Thai parents, and Thai students with overseas experience of more than six months were also identified and excluded. Next, the second part of the revised Thai language questionnaire addressing cultural dimensions was emailed to all 358 of

the accessible remaining and eligible email addresses. No direct or indirect pressure or motivation was involved in gathering the responses from the participants. Provisions to address the queries from the participants were made via phone calls, posts, or e-mails to the researchers, after which data were collected. The scoring system was a 7-point Likert-type scale. As all scores were also presented in the Hofstede textbook, to make them comparable, all scores were ranked or graded and then compared. Next, the results were tested for normality using Shapiro-Wilk analysis. Score comparison regarding gender was also analyzed using the Mann-Whitney test. The relations of age, gender, and year of study to scores of culture dimensions were also further analyzed. In addition, the construct validity of the components was evaluated with principal components factor analysis (PCA) for each cultural dimension. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were examined to ensure the suitability of data for structure detection. Cronbach's alpha was also calculated to demonstrate score reliability. The strength of the association between a component and cultural dimension was characterized by a loading that was regarded as being significant if the magnitude was not less than 0.4 with an Eigenvalue of not less than 1 (Straub et al., 2004).

Table 1. Dorfman and Howell's questionnaire items from Wu's study based on standard Hofstede theory

| Culture dimension	Questionnaire item number and context
Power distance	PD 1. Managers should make most decisions without consulting subordinates. PD 2. It is frequently necessary for a manager to use authority and power when dealing with subordinates. PD 3. Managers should seldom ask for the opinions of employees. PD 4. Employees should not disagree with management decisions. PD 5. Managers should not delegate important tasks to employees.
Uncertainty avoidance	UA 1. It is important to have job requirements and instructions spelled out in detail so that employees always know what they are expected to do. UA 2. Managers expect workers to closely follow instructions and procedures. UA 3. Rules and regularities are important because they inform workers what the organization expects of them. UA 4. Standard operating procedures are helpful to employees on the job. UA 5. Instructions for operations are important for employees on the job.
Masculinity–femininity	MF 1. Meetings are usually run more effectively when they are chaired by a man. MF 2. It is more important for men to have a professional career than it is for women to have a professional career. MF 3. Men usually solve problems with logical analysis; women usually solve problems with intuition. MF 4. Solving organizational problems usually requires an active, forcible approach which is typical of men. MF 5. It is preferable to have a man in a high-level position rather than a woman.
Collectivism-individualism	CI 1. Group welfare is more important than individual rewards. CI 2. Group success is more important than individual success. CI 3. Being accepted by the members of your workgroup is very important. CI 4. Employees should pursue their goals after considering the welfare of the group.
Confucian work dynamics (long-versus short-term goals)	LS 1. Ordering relationships by status and observing this order is important in the workplace. LS 2. Thrift is important in the workplace. LS 3. Persistence is important in the workplace. LS 4. Having a sense of shame is important in the workplace.

Note: form Wu (2006)

3. RESULTS

From 358 participants, 265 participants (74.02%) responded. The age of all students was 21.98±1.71 years.

All scores were compared between the groups categorized by sex using the Mann-Whitney test (SPSS 18.0; Figure 1). The CI scores difference between male and female students was observed ($p<0.05$). Despite this

statistical difference, both genders showed the tendency towards a collectivism society. Furthermore, the overall score score of both genders of all other dimensions showed no difference between genders. (Figures 1 and 2) Therefore, all scores were reported as a summation of both genders. The normality test resulted in a non-normal distribution. Therefore, the central value and distribution were shown by the median inter-quartile ranges. Their scores reflected

the high side of UA, femininity, collectivism, and long-term orientation (Figure 2). To compare the median value to the national average, the rank and score grading of all dimensions are illustrated in Table 2.
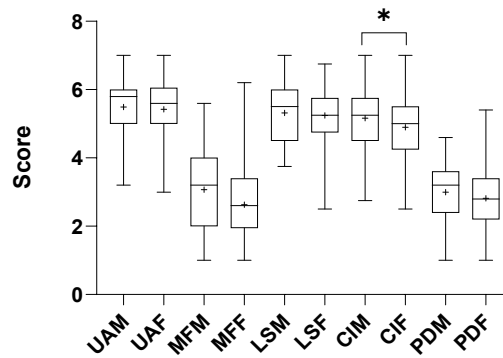
Figure 1. Box plots compare the male and female data of each dimension, except for the CI scores, other scores showed no significant differences (*p*<0.05)
Note: UA: uncertainty avoidance, MF: masculinity versus femininity, LS: long-term versus short-term goals, CI: collectivism versus individualism, PD: power distance, M: male, F: female
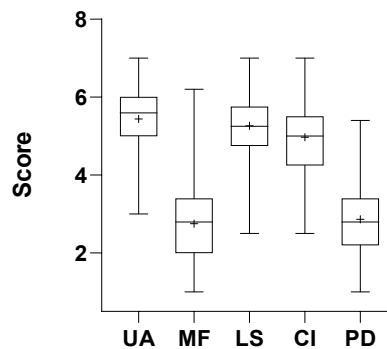
Figure 2. Box plot for the distribution of cultures dimensions with high score in UA, low score in PD, also tendency towards femininity, long-term goal, and collectivism
Note: UA: uncertainty avoidance, MF: masculinity versus femininity, LS: long-term versus short-term goals, CI: collectivism versus individualism, PD: power distance, M: male, F: female

Table 2. The comparison of culture dimension scores and their grading and ranking from Hofstede and this study

Culture dimensions	Hofstede			This study			
	Score	Grading	Rank	Median	Grading	Rank	PCA
1. Uncertainty avoidance	64	Intermediate	1	5.60	Highly avoiding uncertainty	1	1
2. Power distance	64	High	1	2.80	Low	4	-
3. Masculinity-femininity	34	High femininity	3	2.80	High femininity	4	2
4. Long term goal-short-term goal	32	Towards long-term goal	4	5.25	Towards long-term goal	2	3
5. Collectivism-individualism	20	High collectivism	5	5.00	High collectivism	3	-

When all scores were ranked, UA scores of both Hofstede and this study ranked first. In contrast to Hofstede PD score, the PD score of this study ranked last.

The construct validity analyzed using PCA when the loading was adjusted by removing some questions with no significant association (r<0.4), showed that the questionnaire items were rightly grouped into three culture dimensions, UA, MF, and LS. (See Tables 3-4) The internal consistency reliability was determined using Cronbach alpha coefficients, which are displayed in Table 5 and all were interpreted as good. Age, gender, and year of study were further analyzed and showed no relations to any scores of culture dimensions.

Table 3. Components associated with the culture dimensions with significant loading (0.4 or more)

| | Component | | |
	1	**2**	**3**
UA1	**0.711**	-0.054	0.366
UA2	**0.825**	-0.022	-0.022
UA3	**0.837**	-0.027	0.157
UA4	**0.639**	0.024	0.363
MF1	0.046	**0.787**	-0.052
MF2	-0.052	**0.725**	0.292
MF3	-0.050	**0.811**	-0.063
MF5	-0.034	**0.628**	-0.492
LS3	0.239	0.011	**0.824**
LS4	0.185	0.006	**0.813**

Note: Extraction Method: principal component factor analysis. Rotation method: Equamax with Kaiser normalization. Rotation converged in 4 iterations. Kaiser-Meyer-Olkin measure of sampling adequacy: 0.767, Bartlett's test of sphericity: approximately Chi-Square 789.581; degrees of freedom: 45, statistical significance <0.001

Table 4. Questionnaire items from UA, MF and LS explained 65.615% of the variance in the analysis for Thai dental students

| Component | Initial Eigenvalues | | | Rotation sums of squared loadings | | |
	Total	**Percentage of variance**	**Cumulative percentage**	**Total**	**Percentage of variance**	**Cumulative percentage**
1	3.207	32.065	32.065	2.395	23.950	23.950
2	2.161	21.610	53.675	2.202	22.017	45.966
3	1.194	11.940	65.615	1.965	19.649	65.615

Note: This table only shows dimensions with Eigenvalues more than 1

Table 5. Reliability analysis of the components for the dimensions of culture

Culture dimensions	Cronbach's alpha	Interpretation
UA	0.795	Good
MF	0.778	Good
LS	0.751	Good

Note: The measures of the components of the dimensions showed satisfactory construct validity. (Cronbach's alpha>0.7)

4. DISCUSSION

4.1 Culture dimension in Thai dental students

Nurturing cultural trait awareness and engagement might encourage healthy relationships between teachers and students. Hofstede's questionnaire is accepted worldwide for culture cognizant training in business (Hofstede, 2001; Hofstede et al., 2010). Hofstede also recommended applying his concept to education (Hofstede, 1986). This study determined and updated the cultural traits of dental students using this Hofstede concept.

It should also be noted here that Hofstede further stressed a specific procedure to conduct the comparison of these scores. His regulation was also documented in detail and should be followed rigidly (Hofstede, 2013). Therefore, to follow his advice, this study tried to collect the most homogenous sample as possible with rigid inclusion criteria. Since the scores from Hofstede VSM were not intended for comparison, this study applied Dorfman and Howell's model based on Hofstede theory instead. Although the comparison was done using another questionnaire, when all scores of these modern-day dental students were ranked, UA still ranked first. This was consistent with Hofstede and findings of previous studies in Thailand (See Table 2). These studies revealed that UA

ranked first in employees from both the public and private sectors (Chaiwattanaporn and Banchapattanasakda, 2006; Pimpa, 2012). Further, considering the difference of culture traits of Thais between reality and a virtual community, Buriyameathagul reported that UA also ranked first in both situations (Buriyameathagul, 2013). To show that UA is not foreign to Thais, Pimpa (2012) quoted the Thai idiom "*Cha cha dai pla lem ngam*" [translation: work slowly (consciously, no rush) to get a machete]. It describes the old Thai saying of how to create an effective tool—when one must go into the woods, one should not rush (or take a risk). Moreover, a strong machete helps to avoid future risk (danger in the forest). UA may be deep-rooted in Thai culture. In addition, Chaiwattanaporn and Banchapattanasakda (2006) found that Thai employees require detailed accountability and a firm understanding of their duties. Further, UA grew when managers dodged or passed on responsibilities that the employees may have considered precarious. To address this high UA of the Thais, Buriyameathagul (2013) also encouraged leaders to provide clear and precise answers to all questions from other members. Useful guidelines and reasonable rules were also considered mandatory.

The factor analysis revealed that the questionnaire items were rightly loaded into three culture dimensions,

UA, MF and LS, when the construct validity was analyzed using PCA, and the loading was adjusted by removing some questions with the correlation less than 0.4 (See Tables 3-4). These three culture dimensions were loaded from only ten questions and explained approximately 66% of the overall culture dimension with good internal consistency reliability of the measures as confirmed by Cronbach's alpha validity (See Table 4-5). It could be speculated that this questionnaire developed by Wu from the Dorfman and Howell model is moderately reliable and valid for Thai dental students. It might also be evidence of comparable reliability of this questionnaire with Hofstede's VSM. However, the LS may require improvement. Further, although most of the questions of these three dimensions were verified, questions for CI and PD showed a low correlation with the culture dimension. A suggestion would be the creation of the new set of questions for CI. Additionally, a few extra questions should be added to the PD and the recently recommended dimension, indulgence. In future studies, factor analysis should be utilized to verify the improved set of questions.

According to Hofstede, Thai participants score high in PD, collectivism, and femininity. They prefer an established hierarchy and consider that group welfare is more important than personal welfare. They also value co-worker relationships more than personal success. In addition, they were intermediate in UA. They also showed trends towards long-term goal orientation. The interpretation was that they had a tendency to avoid ambiguous tasks and prefer to maintain rituals and norms while viewing societal revolution with suspicion. In contrast to Hofstede, this study revealed the opposite score direction of PD for participants.

While in the past, Thais demonstrated intermediate scores in UA, the participants of this study scored very high in UA. From the PCA result of this study and similar to Hofstede's scores for Thai subjects (See Table 2), there were high scores in three dimensions: UA followed by femininity and long-term goals. For UA, the high score shows the excessive risk avoidance of dental students. One possible explanation is that health care workers are always subject to rigid rules and stringent controls to maintain the standard of care both legally and ethically (Curley and Peltier, 2014; Rada, 2016). Moreover, clinical dentistry involves many uncontrollable factors. These factors could be related to a number of medical emergencies; for example, syncope, intraoral bleeding, or tooth socket related pain. Other uncontrollable factors might include unbearable dental pain and level of sensitivity. These factors could strongly affect patients, both physically and mentally. Another uncontrollable factor is patients' dental anxiety, which dental students may find burdensome. Further, students' unmanageable stress, which may arise from the clinical supervisor, challenging patients, or the students themselves could also raise an uncontrollable sense of insecurity in dental students. Since many equivocal uncertainties collectively affect dental students in clinical dentistry, these could increase dental students' UA scores (Lin et al., 2017; Sweet et al., 2008).

The MF dimension concerns the core value of genders. The roles of femininity (care and affection) or masculinity (success and achievement) show the values in each organization. Obviously, one of the important core values of the healthcare community is to take care of the patients.

Given that dental students routinely care for patients who have fear or anxiety about dental procedures (Lin et al., 2017), this caring value may promote the femininity dimension. Further, unlike medical students, dental students' grades strongly affect their further education and future profession. Nonetheless, probably with kinship and strong friend and family support (from the femininity trait of the entire Thai society), the majority of the students can cope with this competition. These situations may shift the gender culture trait of students to be more feminine. Conforming to Hofstede's score, dental students could still be classified as belonging to a highly feminine society (Hofstede et al., 2010). In short, being friendly, humble, and caring reflects the feminine side of most Thai people, including Thai dental students.

The discernable high score of long-term goal interpreted by Hofstede is the frugality driven endeavor towards modern education to reach a future goal. It may also represent high professional aims.

The CI dimension could be easily interpreted in terms of single versus group work. This study showed higher scores, which reflects the average Thai (collectivism). It might be debatable whether the requirement system forces dental students to put 'self' before 'others' in order to complete studies; however, the root causes of most dental students' stress were reported to stem from three factors. The first was the limited time for clinical tasks. The second was their concern about work quality coupled with confusion about their own expectations. The last was unease over how others perceived them. Moore (2018) also showed that the positive student group demonstrated the competency to perceive the benefit of mutual assistance related to social networking and positive support. This could be the result of the collectivism trait. The collectivistic group may drop their own competitiveness and selfishness when they obtain patient cases to achieve the minimum requirements. Regarding Moore's findings, while dental students might focus on their UA of their perfect goal for patients with the time limit as a stress inducer, the collectivistic group could maintain their composure as they perceived positive support was available from their social network, friends, family members, or teachers. Collectivistic dental students may also suppress their competitiveness and selfishness as these negative attributes may affect how others perceive them.

For PD, this study revealed a fairly low score. In general, Thai society is more oriented towards authoritarian management. Superiors give controlled orders to inferiors, which could be perceived as hierarchical; however, some have argued such directives are more suggestive of the urging of a benevolent brother (Chamchong, 2020). The PD scores of this study theoretically represent a low working hierarchy reflecting that decisions from every level of power are accepted. Additionally, in the modern-day teaching style, PD may not be as strong. These could also have been the result of kinship, femininity, or the collectivist traits of the Thai dental students. Besides, there are only a few dental schools in Thailand. The majority of the lecturers are alumni and still feel brotherhood between themselves and students. Moreover, students admired all their clinical supervisors due to their clinical experiences (Sweet et al., 2008). However, based on the fact that the term power exists in the Thai language and culture in the more authoritative words such as '*pra dej, pra khun, am naj*', the

Thai PD trait could also be the result of seniority and a generation gap (Holmes et al., 1995). Moreover, in clinical dentistry teaching, experienced supervisors possess total authoritarian control to rate dental students. Perturbingly, this study still could not signify this Thai nature. The following list possible explanatory reasons. First, unlike the other three main traits (UA, MF, LS), PCA did not reveal any significant relation among these PD questions. Secondly, the context of the last question (PD 5: Managers should not delegate important tasks to employees) could be unclear. Students rated low scores for PD 5 probably because they want to become a professional dentist, which requires further clinical developmental steps as they learn (long-term orientation). Therefore, this particular version of PD questions might need to be improved. In brief, this particular PD score of Thai dental student aspect is still open for future research and interpretation.

4.2 Benefits for education

The unanimous truth is that policymakers and dental educators should possess fundamental knowledge in learning theories to fully support students' learning and development. Instructional design using systematic eclecticism skill also enables academies to opt for the best strategy from all learning theories combined. More importantly, they should be well-aware of critical appraisal of the stage of dental student learning development. Concurrently, adaptive learners are also required to learn even when all optimal conditions do not exist (Ertmer and Newby, 2013; Karagiorgi and Symeou, 2005). However, when students learn how to adapt during the developmental phase with teachers who are not entirely well-aware or adeptly skilled, empathic communication may come to play. One universally always perceives the joy of being understood. Empathy may increase from the understanding of cultural traits. Baron-Cohen mentioned that "empathy is like a universal solvent. Any problem immersed in empathy becomes soluble" (Baron-Cohen, 2011). Therefore, the success of medical education even with the most complicated method could be compromised if educators are unaware of cultural traits and differences (Gwee, 2008). Embracing cultural traits is recommended to enable educators to be more open-minded, deep listeners, caring, and supportive with a dedication to quality of care and positive attitude towards students for both traditional and online mentoring. When all these factors are brought into play, empathic academies will flourish naturally amidst a humanistic approach (Dennick, 2012).

As mentioned, the scores of dental students were high in UA, femininity, collectivism, and long-term orientation. These scores signify that they consider stability, care, and a friendly environment very important. Applying this education, mentoring or training should provide mental security. Students also feel much more comfortable when complicated lessons are well structured, especially at the start of instruction, and incrementally promote their learning curve. Lessons should be divided into multiple stages with a caring assessment to provide supportive assistance. Moreover, online lessons for dental students should contain the least distinctly competitive intense assessment. It also should provide a bully-free positive self-expression environment. As mentioned, teachers could exercise this inherent humanistic approach when prompted. Moreover, they may prefer learning "how to learn" more than the learning content itself (Bissessar,

2018; Henzi et al., 2007; Hofstede, 1986). The experiential training approach might promote this learning and was recently introduced to dental students (Alvarez and Schultz, 2018).

Strong PD may not promote a good learning vibe. At this stage, due to the changes in social values and technological advancement, the mode of teaching has been transformed from face-to-face and teacher-centered classes to online and student-centered education. Students have also become freer to express their opinions. Cheston et al. (2013) found that when a relaxing environment, especially online, is provided, students are more willing to share their opinions and participate in a learning activity. Therefore, a more relaxing study environment and digital equity should be promoted. Electronic learning facilitates student learning in any subject, anywhere, and anytime. Understanding what lies beneath the psychological iceberg between teacher and students is universal and could be perceived across all media. The necessity of learning theory, stage of student learning development, awareness of online understanding, and empathic communication have been documented (Preece, 1998; Preece and Ghozati, 2001; Karagiorgi and Symeou, 2005; Ertmer and Newby, 2013). This concern was also expanded to the use of health-related online social media (Lin and Ho, 2018). To conclude the impact of this study on distance education, the high UA group does not blindly trust online information. Further, unlike those who are collectivistic oriented, individualists may not prefer the communal use of a tool such as an online platform. In addition, most students may prefer instructional teaching at the start. Based on cognitive theory, most students may initially select an online class given the ease of download, log-on, and browsing a step-by-step guide. After simplification and standardization of the lessons, they may require less instructional teaching. However, a feminine society may still be more motivated to learn via a user friendly and familiar interface with accessible assistance rather a complicated interface, despite the usefulness of the information.

Therefore, based on the result of this study, online health personnel education for Thai should start with simple instruction that incrementally guides the class to a user-friendly interface. Moreover, to entice and engage more learners, the responsive content needs to be well structured and medically evidenced, but without an overly strong social presence.

5. CONCLUSION

Thai dental students showed high scores in UA. They are a highly feminine society and mostly aim to achieve long-term goals. PCA suggested that questionnaire items evaluating UA, femininity, and long-term goals explained more than 65% of this culture dimension context. Further, when gender subgroups were compared, there was a slight difference in the inequality of the CI. To promote dental education well-being for all members, learning and dental education theories are the main principles that should be adhered to in instructional design dental education. Culture traits may also promote a positive education ambiance via humanistic and experiential learning. This article also promotes awareness of cultural traits for both face-to-face and online teaching. It is recommended that it always be embraced and maintained in a very humble and considerate manner.

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