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The Cultural And Attitude Factors Influencing Medical Students' Attitudes Towards Online Education In Hong Kong: A Comprehensive Study

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Abstract

Online education has grown in importance in the medical industry in the modern day. Educators face unique challenges with the millennial generation due to the generation's drastically changing cultural norms and behavioral patterns. More and more studies in the area of medical education have focused on the ways in which online learning has the ability to transform traditional classroom instruction. On the other hand, others think that online education is just a trend rather than a revolutionary breakthrough. Both trends stress the significance of educators' familiarity with online education. In this era of heightened interest and uncertainty, there is a dearth of research regarding the function of online learning from the perspective of future doctors.

To better understand medical students' views on online education, the researchers conducted this poll. An assessment of ethnographic studies in medical education was first carried out using a technique for quality-of-study analysis. In order to identify significant methodological errors in current practice, this was carried out. As part of a sequential exploratory multidisciplinary study, it went from a qualitative to a quantitative phase. This phase's data was used to create a questionnaire survey that would triangulate with previous results and provide a more comprehensive understanding of the developing phenomenon instruction came from wearable tech. Some noteworthy outcomes were generated by this thesis. In order to delve even further into the viewpoints and study habits of medical students, a game-based environment for learning was subsequently constructed.

Keyword: *Online Education, Educators, Learning, Methodology.*

Introduction:

Smartphones and tablets are now practically ingrained in people's everyday lives as a result of the global expansion of online learning (Lau et al., 2020). The computing power of modern mobile devices is on par with that of traditional desktop computers. What's more, they're portable, have a wide variety of applications available for download, and can work regardless of the time of day or where they are. These advantages have led to their widespread use in everyday activities (Wai et al., 2018). The proliferation of wireless and electronic communication has coincided with the rise of mobile devices as a necessary tool for learning in the classroom and on the job. Consequently, many

library and information science professionals throughout the globe, as well as educational experts (Lau et al., 2020), are interested in studying students' mobile device use patterns in order to improve learning and teaching assistance.

With mobile technology, students may easily switch between in-class and out-of-class study, as well as between portable and desktop devices, allowing for a more streamlined learning experience overall. That is to say, mobile learning can happen whenever and wherever it is most convenient for students and teachers alike, bringing the classroom into all sorts of real-world and virtual settings and establishing a central hub for social interaction and collaboration (Fong et al., 2020; Lam et al., 2019).

1.2 Background of the study:

Following the Tang Siu-pun (Ah-bun) case within the 2000s, euthanasia gained significant attention and became a popular subject in Hong Kong. While paralysed in a gymnastics mishap in 2004, Ah-bun pushed for legislation to legalize euthanasia, saying that everyone should have the freedom to determine their own life. Hospice care guidelines state that euthanasia is both immoral and against the law for terminally sick patients. Withdrawal of life-sustaining therapy is, nevertheless, permissible under some circumstances, such as when other therapies have failed. Since the question of when and how a person dies is significant to both healthcare providers and their patients, euthanasia warrants our attention. Chronic illnesses including cancer, dementia, and stroke are expected to impact an increasing number of individuals as the population ages. Patients, particularly those with terminal illnesses, are likely to experience extended suffering under these settings, leading to a poor quality of life. For instance, people might feel queasy and have trouble swallowing. Depression might set in if their physical (Anderson, 2020) handicap lasts too long. The advocates of euthanasia claim that it may alleviate the physical agony and ongoing miseries of terminally ill individuals. Seventy percent of 77 Hong Kong terminally ill patients surveyed were in favor of active euthanasia. When it comes to alleviating the strain on the healthcare system, euthanasia is just as important as it is for patients. Some physicians have shown that legalising euthanasia might reallocate around 20–30% of the enormous cost of maintaining the lives of terminally sick patients to other healthcare providers (Aver, 2019).

1.3 Literature Review:

In their simple definition of e-learning, Masters state that it is the process of educating oneself via the use of the Internet. This is an excellent starting point, even if they acknowledge it is an oversimplification used more to establish the scene than to guide the research. This exemplifies how the internet has played a crucial role in shaping modern e-learning. Sharing of information and group initiatives are growing more and more dependent on this component, despite its occasional neglect in competing definitions. To help define e-learning, one good place to look is in the large body of work by Clark and Meyer about online education. Below, they provide a different explanation: There is a lack of understanding among those who work to assist student learning digitally about the root causes of students' worries about the privacy of digitally delivered teaching. On the one hand, the idea of a digital device, such a computer or mobile phone, neatly encompasses the wide range of hardware possibilities used today. This spectrum encompasses a wide range of devices, from desktop computers and laptops to smartphones and tablets, and everything in between, including state-of-the-art innovations like smartwatches, (Verikios, 2020) wearable tech, virtual reality simulation equipment, and more. This definition, however, needs more examination before it

can be accepted at face value. For instance, in today's classrooms, the term "instruction" is out of place. the other hand, expand on the following goals of online education: The term "e-learning" refers to a specific kind of online education that emphasises asynchronous communication and cooperation among students and faculty as well as staff-to-student and student-to-student interactions. Finally, provide a hopeful, far-sighted picture of online education: E-learning aims to enhance the learner's ability to utilise and apply various information and knowledge while also improving the quality of life via the blending of human perception with ubiquitous computing. Here, the idea of e-learning is centered on the potential of the medium to enhance students' comprehension. That is in line with what has been described (Pinto, 2020).

1.4 Purpose of the research

This research aims to investigate the perspectives of medical students in a Hong Kong university of medicine on online education. A number of e-learning initiatives were either in the planning stages or were ready to go into beta testing. Lots of other schools have done the same thing, and it was a great opportunity to hear things from students' points of view.

To overcome the aforementioned challenges and get highly valid insight into student practice, this research suggests an exploratory mixed-methods approach. One component of the research may be a quantitative questionnaire, while the other could be qualitative ethnographic fieldwork. The purpose of this collaborative research was to offer a detailed picture of how medical students feel about and interact with online education. The rationale for using a mixed-methods strategy was to get a deeper understanding of a new phenomenon by combining the strengths of both phases. Triangulating the relevance of the results may be easier with the combination of qualitative and quantitative data.

1.5 Research Objectives:

- To find out the factors that affect student attitude towards online learning in Hong Kong.
- To understand the personal social and cultural factors that influence learning.

1.6 Methodology:

A cross-sectional survey was carried out in this research using an electronic questionnaire. This four-point Likert scale, where 1 indicates strong disapproval and 4 signifies strong agreement, served as the basis for the framework. At the end of each topic, they also included an open-ended question to get students to share their thoughts in a more spontaneous way, which may have led to some surprising discoveries. Questionnaire questions were developed in a somewhat different way than is customary for a stand-alone survey. The purpose of this quantitative element of the mixed-methods research was to expand upon and corroborate the results from the qualitative phase, rather than to design a brand-new tool for extensive use with medical students. This barred the use of psychometrically validated instruments, which had been used in prior research on issues like patient safety, depression, and burnout. According to authors like Feilzer, a realistic strategy for mixed-methods design "might seem like this. The cultural phenomena discovered in the early days of anthropology study are mostly responsible for it. As a result, the norms, attitudes, and points of view examined are those of medical students themselves. According to Creswell, when qualitative data is transformed into mixed-methods surveys, quotations become the items and codes become the variables. Subsequent results chapters will give the qualitative results that drove the formulation of the questionnaire questions and hypotheses; therefore, they will not be repeated here. A number

of focal points that surfaced during the process of qualitative study are included here for purposes of methodological clarity. The ethnographic component of the research uncovered them via a variety of observation of behaviors and attitudes across these domains. via iterative analysis, they were developed into qualitative themes. Here is a rundown of the key points that emerged from the process described earlier:

Two Connections Between Online Education and Examination Industry and E-Learning and Inspiration Issues and difficulties pertaining to occupational health Medical (a) Technology Use (b)

- **Educational Value of social media:**

Consistent blogging and sharing Concerns about the confidentiality of data stored

Educational applications of mobile devices Audio and video are two of the four e-learning alternatives. Using this structure as a guide, the first wave of questionnaires item generation produced questions that extensively explored each of these subjects. To make the poll questions as precise as possible, researchers consulted experts and conducted further literature reviews. Feedback from educators, as well as many rounds of focus groups led by academics well-versed in survey technique. Feedback from real medical learners and a pilot study helped refine the method. Given the results of the qualitative investigation, they propose the following three hypotheses.

i) The assumption was that students would be too focused on their exam scores to actively engage in online and social media-based learning.

The idea was that if students were worried about the consequences of screen addiction, their interest in online education would decrease. It was postulated that students' self-efficacy in handling many tasks at once while viewing video e-learning would impact their actual performance. What are the perspectives of Hong Kong medical learners on online education? This is the key topic that this thesis attempts to answer via testing three related hypotheses. The first study looks at exam culture, the second at digital health practices, and the third at how students' perspectives affect their e-learning habits.

- **Procedures for Recruiting, Sampling, and Collecting Data section**

Every single one of the MBBS first-year students at HKU took part in the research. A third-party platform ensured distant data encryption and safety while the survey was conducted online. SurveyMonkey.com, located in the United States, was selected since it fulfilled all of these criteria. The recruiting process made use of student email and Facebook. On a biweekly, monthly, etc., basis. A social media post on Facebook served as a reminder for the open announcement following two and four weeks.

Data on the population:

Researchers collected important demographic data for our investigation. Some of the details included the applicant's gender, age, academic year, dorm status, and JUPAS status (jump admissions system).

- **Analysis of Data**

After exporting survey data from SurveyMonkey's secure server, researchers entered it into IBM's SPSS 22.0 statistical tool. They used descriptive statistics to count students who liked, disliked, or had no opinion on each item. Logistic regression was used to evaluate students' exam attitudes and

networking and e-learning habits. They will not employ a web page if specialists do not believe it would help my test performance. They use the God Notes digital file seniors created, believe it's better compared to different e-learning resources, share or upload online materials that others have found useful, and find medical education-related social media posts useful. Logistic regression analysis is also used to examine student concerns regarding digital device use, disease symptoms, and learning technology choices. These questions included independent and dependent variables:

i) I worry I spend too much time on electronics. Any of the following bodily pain symptoms attributable to excessive electronic device use: Consider exercising regularly to relieve back, wrist, eye, headache, leg, and neck pain.

Usually prefer real books and tablets or laptops for class notes. Viewing films online helps me recall study findings. Finally, using logistic regression, researchers analysed students' expectations and actual multitasking while watching e-learning videos.

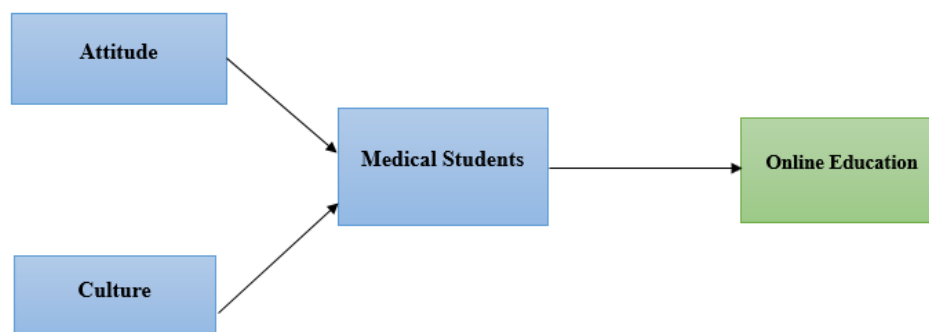
These questions included independent and dependent variables:

While viewing films, I think you can multitask and learn a lot. • Do the following, like viewing a movie 1.5 percent or more than twice faster: Working out of computer multitasking. On the go Talking to loved ones. Musical singing. Nothing—it captivates them.

When testing the proportional odds hypothesis (test for parallel lines), initial attempts to use the Likert scale's ordinal parameters with an ordinal regression equation failed.

Fitness for purpose. Possible causes include... Ordinal logistic regression showed several zero-frequency boxes due to midway responses and low-end information. The researchers then used logistic regression to verify that levels one and two and levels 3 and 4 were agreeable. This model was chosen because the Hosmer–Lem show test revealed that grouped logistic regression model has the best goodness-of-fit.

1.7 Conceptual Framework:



1.8 Results:

The survey was filled out by 656 individuals (56.1% of the total) out of 1168 who were contacted via email and social media. The respondent's demographic information is shown in the table below.

Gender	Male 51.3% (331)	Female 48.7% (314)	
Method of entry	JUPAS 82.1% (514)	Non-JUPAS 15.6% (106)	Graduate-Entry .1.8% (17)
Current Hall Resident	Yes 6.52% (42)	No 93.48% (602)	

table 1: Demographics of questionnaire respondents

Table2: The relative representation of each year group amongst questionnaire respondents

Current year	MBBS I	MBBS II	MBBS III	MBBS IV	MBBS IV*	MBBS V
	17.2%	18.5%	17.4%	16.3%	16.9%	13.8%
	(111)	(119)	(112)	(105)	(109)	(89)

Since HKU had a double intake of MBBS students in year IV, there were two-year groups when the questionnaire survey was taken. Students in the unstarred MBBS IV group finished the new 6-year course, while those in their starred category finished the old 5-year curriculum.

- Opinions on online education in general:**

Students had a generally unfavorable outlook on online education, with only 36.4% expressing a preference for using online resources. With well-crafted qualitative statements supporting their opinion, 9.7 percent of respondents unanimously stated that online learning would be their preferred method if it were available. One of the primary ways of studying is via online resources. Referred to in Question 86. Using City Notes, they were able to go from a student whose performance was in the lowest 25% to one in the top 25%. They should try this if they have trouble remembering things. The researchers think it's important to provide people with a good grounding in the basics using a table, flowchart, or organized differential diagnosis list in this day and age of immediate information. Google (84.2%) and Wikipedia (80.3%), which are both non-medical general websites, were the most common online learning resources. Because of its extensive cross-references, user-friendliness, and organized structure, Wikipedia is an excellent resource. Questions twenty-seven. With a rate of 48.6%, students used to use evidence-based search engine PubMed. While only 20.7% of people use the medical-specific streaming website Med Tube, 54.4% of people who took the survey utilise YouTube as a resource for online learning. 35.5 percent of those who took the survey stated they used an educational app on their mobile device, such as Khan Academy, UpToDate, Radiohelia, or Medscape. One student elaborated on how he achieved his academic goals by making use of a variety of internet tools.

Medscape is my go-to resource if researchers need details on a certain disease. All the information they want is easily accessible and organised in Medscape. In my opinion, however, the faculty is where they find out how to use PubMed. In terms of style, it more closely resembles articles than manuals. Here they have research. On the other hand, they work well for learning via projects. This is the sixth ethnographic interview. In determining which online learning tool to utilise, 81% of students rated suggestions from other students as very important. Notable as well was the 67.0% referral rate among the elderly. It was clear from the remarks that usability was a major consideration for 59.0 % of the students. They seldom access the HKU neurology website due to the inconvenience of signing in.

• Medical students use of video e-learning

Most e-learning students watch videos. Internet videos supplemented education for 60% of respondents. This supported the ethnographic study and qualitative questionnaire results.

P: Wikipedia is popular and useful.

I: OK.

P: YouTube is great since you can receive a guided explanation and diagrams. I endorse a YouTube speaker. (3) Ethnographic Interview. Animations and films help me learn. Question 132 YouTube prevailed over Google Video (39.1%), Youku (38.0%), and Google (78.6%). Twenty-eight percent of students preferred Med Tube, a medical video service, while 41% preferred university-provided resources. An ethnographic interview student said YouTube is the most beneficial resource for pupils. I have no further information. YouTube is the most useful. This is the sixth ethnographic interview. Students gave other reasons for picking YouTube videos.

P: For months, I saw the same programme by the same creator.

What appeals to you about them?

P: Their jokes are wonderful and funny. Next, you learn mnemonics to recall the content. The information they offer is concise and straightforward. They keep repeating key points.

I: Can you explain why you love a YouTuber?

He's enjoyable to start with. His humor is delightful. One of my favorite professors, Professor N, provides examples and explanations to simplify learning in class. His sketches may be understood without a large schematic with 10,000 labels. Second In-Depth Interview (Ethnographic Study).

Medical students called the video selection process straightforward expediency. Eighty-one percent of the respondents picked the first video in the results of their searches, whereas forty-two percent strongly agreed. Qualitative student comments reinforced the selection process's efficiency. Personal commentary on the opening 30 seconds of the video.

1.9 Discussion:

While the reported 62.0 percent rate of video use in e-learning is high, it is not uncommon. If this is the case, it runs counter to the rising tide of popular pedagogical practices like MOOCs and video-heavy flipped classes. Some studies have shown that all students gain by incorporating video into their lessons, while other studies have shown that students' actual implementations of this strategy differ substantially. My study group's YouTube use rate of 78.6% was much lower than other situations, such as a study done in the US by Jaffar that found 98% of students used YouTube. Although 35.5% of students in our research utilised smartphone apps, 79.8% of students in another poll did. It is possible that these findings are influenced by regional differences. In contrast to the West, China does not make good use of online health education resources. Chinese internet users in China's mainland are unable to access Western video websites like YouTube due to a firewall. Curiously, 38.0 percent of pupils in this poll used the Chinese language website Youku for video learning. The results imply that medical students in China may not rely on YouTube as much as they do in other countries. Even though the research population was taught in English, these tools seem to be widely used. This means that medical instructors in this area will have a future difficulty in adapting resources to the local population's requirements by making them more available in Chinese.

1.10 Conclusion:

Several subsets of medical students' use of online learning resources are examined in this paper. There were strong opinions on both sides of the online education debate, and the chosen model

took both sides' needs for simplicity and general agreement into account. Significant obstacles to the broad adoption of e-learning were the number of accessible online resources and worries concerning their quality and relevance to local requirements. A future where students' requirements are met via the production of Learning by doing tools and e-learning options like recorded lectures was suggested.

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