



Analysis of cultural ecosystem services and heritage tourism based on social media: Virtual learning on tourism information management

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Abstract

Due to the far-reaching nature of the Internet and the rapid development of global information. Tourists and learners of different time and space can participate in sightseeing activities through the Internet, resulting in changes in sightseeing styles, which not only change the presentation of knowledge, but also change the way of learning information exchange, and the sightseeing environment also. Therefore, the real environment of the traditional classroom is extended to the networked virtual world of learning. As far as users are concerned, the biggest difference in sightseeing websites lies in the learning mode provided by the entire network sightseeing. However, it can be roughly divided into two different types: (1) established by the enterprise organization and (2) required to be charged. Courses and websites can be established by school units. Online tourism is a new type of education derived from the digital revolution and 4IR. The vigorous development in the country is also an important way for the government to achieve the goals of "lifelong learning" and its "knowledge economy" policy. The industry believes that the most important projects it must be involved in are: (a) establishing its own leading position in online tourism expertise (b) using learner feedback as a basis for improving network tourism (c) continuing research and development to expand the capabilities of the network sightseeing platform; scholars believe that the most important projects are: (a) the establishment of a school network sightseeing unit (b) to improve the interaction between the tourism network and the visitors (c) to provide a variety of course contents. However, in all the problems and difficulties faced, the industry believes that the most important difficulty is to make the public see the digital changes as popular events and accept the way to identify online tourism; scholars believe that the related technology of network tourism needs to be strengthened.

Keywords: Internet, global information, sightseeing, digital revolution, lifelong learning, knowledge economy.

Introduction

The society of the 21st century will be a society that constantly changes with the changes of social life, such as the patterns of life, the value, the innovation of technology and the organization of society, all of which will evolve with the times. Major changes have taken place. This kind of change



is accelerating the advancement step by step, so some people call it the "temporary society", whose main features are dynamic, adaptive, rapid change, imagination and innovation (Carmeli, 2006).

The influence of ICT on tourism has been broadly accepted as one of the major changes in the last period: there are thus new ways of communicating with potential tourists but only slight attention has been paid to the role played by new media in education in these fields (Cantoni et al., 2009). The booming Internet and computer technology have changed the way people live and think. E-commerce, online marketing, e-economy, etc., make people's consumption and shopping habits different from the past. For example, Telemedicine enhances the convenience of people seeking medical treatment. At present, telemedicine has been used for teleconsultation and surgical treatment, effectively integrating medical resources. However, Distance Interview has saved people from the pain of running to the hospital (Bollen & Long, 1993). The development of long-distance sightseeing is to enable more people to learn more conveniently. However, when establishing online sightseeing, one should consider the different backgrounds of the organization and the background of the main users. It must be realized that the tourists and the role of the learners are different from the traditional way of sightseeing in the past. The mentality of experts and tourists must be changed to move with the 4IR developments. Mpofu and Nicolaidis (2019) state that:

The "Fourth Industrial Revolution" (4IR) is an expression, which is now used to frame and assess the impact of emergent technologies in the 21st century. The rapidity and quantity of changes that are occurring will result in socio-economic and also political upheavals as there are likely to be increasing shifts in power dynamics, wealth acquisition, and information. This is clearly a foremost transformation in society, and especially the IT worldview demands appropriate ethical insights, actions and sanction. If we are conversant about the vicissitudes and the rate of their occurrence, society will be better placed to try to ensure that advances in technology will benefit all stakeholders.

In recent years, the humanized interface of computer window and the gradual decline in the price of information devices, as well as the booming of the Internet, have all contributed to the popularity of computers at all levels. However, digital information transmission has evolved into the future. The best way to accept new knowledge under the impact of this wave, is the change of the school's sightseeing environment which is also expected by many administrative units and all those who care about education reform. In the 87th year of the Republic of China, the Ministry of Education announced the "General Outline of the Nine-Year National Curriculum for National Education", in which the provisions of the "Course Objectives" and "Basic Competence" are clearly defined. In the education of the school, tourists must be guided to cultivate [the ability to use technology and information], [inspire the spirit of active exploration and research], and to cultivate the quality of life for lifelong learning in response to changes in the environment. Therefore, the idea of education today is like the former Lin Qingjiang -Minister of Education's statement,: "Let children have the ability to take away, not a bag that can't be moved." From this point, we can understand that the application of information technology to school education will be an important topic for future tourism.

The development of computer networks has broken through the limitations of time and space, which has not only affected our lives, but also impacted the learning style. In the future, people will feel completely different online lifestyles, whether they are at work, consumption, education, etc., because the Internet and computer technology are booming. Online Sightseeing will drive the push towards lifelong learning, such as stated by Starr Roxanne Hiltz (Department of Calculators and Information Science, New Jersey Institute of Technology, Newark, NJ 07102, USA): "Virtual classrooms are not only active learners. Learning, it will also be the best choice for providing a lifelong learning pipeline". Starr Roxanne Hiltz made a comparison (Table 1) and a comparison between traditional classrooms and virtual classrooms (Zaheer et al., 1998).



Table 1: Comparison table of traditional learning & virtual learning

| Traditional classroom | Virtual classroom |
|---|--|
| Listen and say: one person at a time. Most of them are experts | Typing and reading: You can have multiple people at the same time. Tourists take the initiative to participate |
| Tourists listen | People learn together. |
| The same class of learning pace throughout. | The respective learning steps are more and more personalized. |
| Traditional classroom | Virtual classroom. |
| Simultaneous activities. | Anytime, anywhere learning. |
| Not social. | Mixes multiple social aspects. |
| Mostly personal work. | Most of them are group activities and homework is given. |
| Tourists must take notes. | Auto-complete notes, can be stored and reviewed at any time. |

Research purposes

Mystical agents of the society of network technology have triggered the expectations of new learning models to match the individual's learning style and the individual's learning environment. In other words, new technologies have led to personalized learning (Alexander et al., 2017). This research is a learning model that integrates learning behavior through online sightseeing into engineering writing, and explores four aspects of learning motivation, learning style, learning performance, and learning satisfaction. The following are the two main points to be explored in this article (Alberca-Oliver et al., 2015):

1. Exploring the reasons for the differences in online sightseeing learning results, analyzing the advantages and disadvantages of each method and the applicability of different data.
2. Integrate the results of research analysis to provide decision makers with effective methods.

Research limit

Since the study only had questionnaires based on individual cases, based on the research area and the limitations of the research samples, the research results may be subject to some restrictions: 1. Since this study is a questionnaire collected for individual cases, the results will be slightly different for different industries. 2. The questionnaire is the simplest and most basic method of investigation, so it may cause error situations for the whole enterprise.

Network sightseeing definition

Network tourism has been set up in a short period of time, and it has a place in distance education. It has also had a great impact on the educational pattern. Online sightseeing is classified as a distance education course. In the network learning environment, experts and tourists do not need to face each other, they can use the communication tools on the WWW (ex: E-mail, asynchronous discussion area, etc.) to exchange opinions. As well as communication, one can arrange one's own learning progress and conduct learning activities at will (May & Sanders, 2013).

The type of education can be divided into four types according to time and space (Yolal et al.,



2015) (Table 2), which are (1) simultaneous sightseeing patterns: tourists and learners. Activities that are carried out at the same time and in the same place, ex: traditional learning environment (2) sightseeing patterns at different locations at the same time: tourists and learners at different locations at the same time, learning activities through media communication, such as remote video conferencing (video conferencing), real-time multicast (3) sightseeing at different times and at different locations: using the media to record the process of sightseeing and sightseeing, providing learners with different time to select, watch, and learn activities, such as curriculum-on-demand. (4) Sightseeing styles at different times and at different locations: Tourists and learners are asynchronous at different times and locations apply thus learning activities, may be web-based teaching based on the global information network.

It can be seen from Table 2 that the network sightseeing based on the global information network is a sightseeing type belonging to different times and different places. In the online learning environment based on the global information network, experts and tourists do not need face-to-face contact, but can use the global information network communication tools (E-mail, asynchronous discussion forum, chat room, etc.) to exchange opinions. As well as communication, learners can also arrange their own learning progress to carry out learning activities, so that learning is no longer limited to traditional classroom settings.

Table 2: Classification table under Information asymmetry

Type 1, Simultaneously, same place, traditional learning

Type 2 Simultaneously, different locations, video conferencing, real-time multicast

Type 3 Different time Co-location Course on-demand

Type 4 Different time Different locations E-learning

Learning motivation under information asymmetry

Motivation refers to the internal process of causing an individual's activities, maintaining the activities that have already been caused, and causing the activity to be directed toward a certain goal. Motivation to learn refers to the intrinsic psychological process that causes tourists to learn activities, maintain learning activities, and lead to the tendency of the learning activities to be set by the expert in the field.

It refers to activities that will cause tourists to learn, maintain learning activities, and tend to set the inner psychological process of the goal. Citing "Likert's five rating scale", it lists some of the motives that five groups of respondents may receive when choosing a network tour. The respondents follow either 1 - very unimportant, 2 - Not important, 3- no opinion, 4- important, 5-- very important, divided into five levels to give points. Increase the learning opportunities of general exploration, in order to expand the learning experience, and then discover the interest of learning, and adopt a variety of sightseeing methods to improve learning motivation and learning effects, encourage automatic learning, establish your own learning goals, and pay attention to research. Attitude training is useful to provide some training in methods, and focus on the development of reading habits, training publication and reporting skills, it also encourages division of labor and cooperation, and provides good interpersonal interaction, and deeper and wider textbooks are crafted to enrich the expertise.

Learning style under information asymmetry

The term "Learning Style" has been interpreted by different scholars as having different meanings. Some people think that learning style is a cognitive style; some people think that learning style is a



personal learning method. In short, learning style refers to the learner's preference for the learning process. Learners' preferences for the learning process are divided into dispersers, aggregators, assimilators, and adjusters. According to the five sets of questions that Kolb designed and developed for the learning type, the respondents sorted each of the four items describing the learning type according to whether they match their own from 1 to 5.

Learning performance under information asymmetry

Learning performance is a measure of a learner's learning outcomes, which is the most important project in the quality assessment of tourism. Learning performance is influenced by factors such as learning style, curriculum design, and tourism. Respondents were asked to self-assess the learning performance after the completion of their writing course in five learning performance assessments, so that the respondents were very unsatisfied, 2-unsatisfied, 3-notified, 4- Satisfied, 5 - very satisfied, and had to choose one of these options.

Learning satisfaction under information asymmetry

Learning satisfaction is the main factor in measuring learning outcomes. There are many factors that affect tourists' learning satisfaction. In addition to the personal factors of tourists, experts, curriculum and learning environment may be affected. Researchers may focus on different influencing factors because of the purpose of the research or the circumstances in which the research is conducted.

A feeling of a learning activity or a reaction to an attitude. Citing the Likert Five Scale, five respondents listed their expected satisfaction before choosing a network tour and the overall expected satisfaction, so that the respondents were very unsatisfied, 2-unsatisfied, 3- No comments, 4-satisfied, 5--very satisfied, given points in the five levels.

Research Method

According to the factor analysis, the questionnaire was divided into three categories: response level, expert-tourist interaction, and group communication. The results were divided into tourists' social, self-learning, improvement effects, response levels, gains, learning performance, independent tourism, expert-tourist interaction, group communication, online assessment, assignments, and textbook design. Analysis of the degree was conducted and it was found that the reliability was 94.80%, and thus, the questionnaire was valid.

The KMO and Bartlett tests are related to the test scores.

1. Bartlett: The gauge group is used to measure a variable, so it should have a certain degree of correlation. When the Bartlett check is significant (significance = .000), it means that the question group has common Factors (one or several factors).

2. KMO: However, if the degree of correlation between the questions is too high, it will cause multiple collinearity.

A topic with a particularly high degree of relevance is actually the same topic split into several topics, which is inconvenient and failure to comply with the original meaning of the design scale question will also result in repeated interpretation and excessive expansion of explanatory power. Therefore, it is necessary to look at the KMO sampling suitability measure. The KMO must be above 0.6. The closer the KMO is to 1, then It indicates that the relevant situation between the scales is good, and the more suitable the factor analysis is. Individual behavioral variables are composed of common factors (latency factors) and unique factors. The total variation is also composed of commonality and uniqueness.

Commonness (hk2): refers to the part of the total variation $V(X_k)$ that can be explained by latent factors, which is equivalent to explaining the variation.

R2 in regression mode

Uniqueness (e_k): refers to the coefficient of uniqueness factor (e_k), but the square of uniqueness (e_k^2) is that the total variation cannot be explained by the latent factor is equivalent to not explaining the variation.

The principal component analysis method is used to select several components from the problem group, and the total variation explained by several topics among the several topics is usually explained, and the interpretation variation of the first component is usually the highest. For example, the number of variants that can be explained by this component is 36.146% from the group of the first component selected. However, this research report can be performed by simply selecting the first component of the selected component.

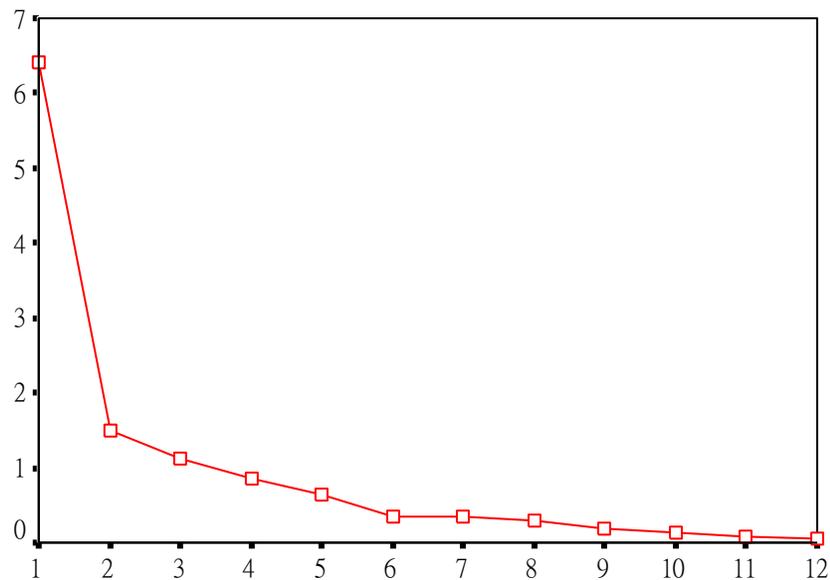


Figure 1. Factor steep slope map

The factor steep slope map is also a graphical representation of the sum of each component in the total variance. If the difference between the first component and the second component is particularly large, it means that there is an important factor in the first component, and the slope between the second to third and fourth components is very gentle, indicating that The ingredients of 2 to 12 do not have important factors, so the second to twelfth components are not required.

From the final composition matrix, SPSS only selects 3 components, and the factor load from each component in this component. The higher the factor load, the higher the importance of the question in this component. If the factor load is less than 0.6, then the question (ex: turist social.1.2, self-learning.2.3, promotion effect.2.3, etc.) None of them are included in this component, so this question needs to be removed when doing the next stage of reliability analysis. However, the question is still placed below to see the results of the reliability analysis of the question. The results of factor analysis showed that the results of Bartlett's sphere test were significant, and the KMO coefficient value of the Measure of Sampling Adequacy was 0.734. After the factor analysis, in the component matrix after the revolving axis, each component needed to contain at least three items to become a factor.

Discussion

The idea of this research question comes from the researcher's daily sightseeing experience, observing the learner's learning behavior and the results, deeply show the lack of life of the university textbooks, making the tourism strategy unable to make the learner and the daily life situation. This is as the link has resulted in the inability to apply the lessons learned in the classroom to life situations. Therefore, researchers hope to design a set of sightseeing models to improve this learning problem, so that learners can apply what they have learned in their daily lives. Questionnaire questions can be divided into four categories: the first category is learning motivation; the second category is learning style; the third category is learning performance; and the fourth category is learning satisfaction.

Reliability Alpha = 0.9480 means high credibility, that is, considerable correctness and credibility

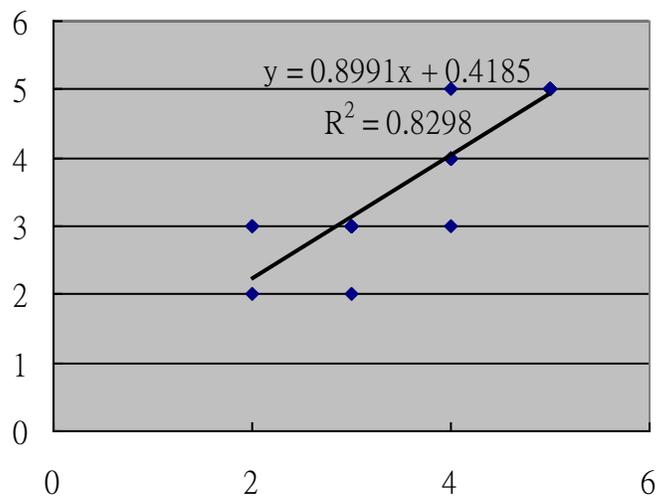


Figure 2. XY diagram of learning analysis

Figure 3 is an analysis of the percentage of purchased brands, consisting of tourists socializing, self-learning, and two problem items. Its $y=0.8991x+0.4185$, $R^2=0.8298$

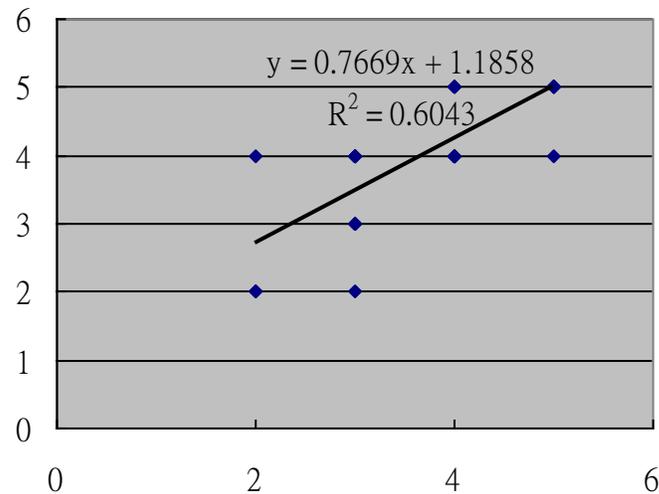


Figure 3. XY diagram of learning analysis

Figure 4 is an analysis of the percentage of purchased brands, consisting of expert-tourist interaction, group communication, and two problem items. Its $y=0.7669x+1.1858$, $R^2=0.6043$

In addition to simple learning methods, online sightseeing is a medium that is used to improve social skills. The use of online sightseeing is quite common for modern tourists, especially among tourists with a certain educational foundation. This study combines five aspects of online tourism definition, learning motivation, learning style, learning performance, learning satisfaction and related comparative research. When tourists choose a learning method, the time, place and network given by the network sightseeing is vital. The factors above the various levels of sightseeing, such as inter alia free holiday time, convenient learning places, on the sightseeing platform, etc., all have a great influence on tourist loyalty. To improve learning motivation, learning performance, and learning satisfaction, one can use expert leaders or tourist groups of young ethnic groups to promote mutual imitating trends and attract others to use the network to further enhance this through their use and opinions. Young people's cognition of learning motivation, learning performance, and learning satisfaction is essential to be understood.

Conclusion

This study is aimed at tourists' basic background data such as gender, age, education level, occupation, and online learning experience in the environment of online sightseeing, as well as learners' online sightseeing definition, learning motivation, learning style, learning performance, learning satisfaction and its related comparative studies which all explore the interrelationship of these variables in the online sightseeing environment.

Distance learning in virtual reality brings a new opportunity for education. This virtual and contextualized network learning model promotes the active construction of an individualized environments by learners. Learners are seen as an open system that interacts with the environment and transforms, reorganizes, and creates the inertia of what are inputs. However, learning is a constant breakthrough and reorganization. In this context and scientific educational situation, the personal qualities of learners cannot be ignored. In fact, the complexity of personal variables, which is the main reason that affects various learning changes, is also what tourism researchers need to explore.



According to the above research, most of the questionnaire respondents were young people aged 18 to 24 years old. These young ethnic groups decide whether to study because of time, place and preferences before learning. Most young people aged 18-24 have studied. Because most of them are tourists, they attach great importance to learning; but it is not only as long as learning is effective, when this study is not inspired or learning ability is low. However when there is no motivation, one will not learn, because even if learning is very convenient and has preferences, the results are not good, even if you use online sightseeing, it does not work, why then waste a large sum of money to buy something that is useless to you. From the questionnaire, we know that young people will go online for sightseeing when the sites are convenient. They prefer time and space and learn useful things to them when they study. The quality of learning should be considered, because when the quality of learning is the best, learning motivation will increase, and the learning motivation will increase the learning harvest naturally, but the time allocation of tourists' autonomy is always limited, so it will one needs to be concerned about the time factor.

Research suggestion

Based on research limitations and research findings, this study has the following recommendations for follow-up researchers:

1. The study found that under the circumstance of the network, tourists have fewer social skills than professional abilities, but this study has not been further explored. Social relationships and capacity building are the next question in the context of online travel. The social relationship between experts and tourists in online learning is not necessarily less than that of traditional sightseeing. Establishing social relationships is an important part of online learning. It is also pointed out that introverts may have better learning performance in online learning. Is the social function of online sightseeing lacking? Do introverts have better performance in online learning? These are the directions that we should explore and study.
2. This study explores the behavior of tourists in the same sightseeing environment. Any follow-up researchers can compare the same courses and the same experts and background tourists in the online learning and traditional learning environment. It is different and explores the reasons.
3. In the presentation of the textbooks, most of the sightseeing websites are mainly based on static textbooks. In the future, dynamic textbooks can be developed to be added to FLASH. Follow-up researchers can present the impact on learning outcomes for dynamic and static textbooks. Some in-depth discussions and research would be a good idea.

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