

THE SOCIAL AND CULTURAL STRUCTURE OF THE OTTOMAN CITY

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ABSTRACT

In Lapidus Grunebaum's Islamic City model where the socio-economical and spatial relations are described, four categories of social organization are mentioned as seen in Islamic societies, but emerging in Anatolia only during the Ottoman period. In Muslim societies, such way of an organization, no matter urban or rural, constitutes one of the most important and most comprehensive social organization categories of social life. These categories can be classified as emperorship or state organization, religious communities, artisan-akhi organizations and districts.

Palaces, mansions, big mosques and *külliyes* representing the power of administration staff such as vizier, *subaşı* and governor of sanjak who are at the top of emperorship or state organization, are the focal points of Ottoman cities. An architect designs these buildings which are of stone construction, costly and building organization is comprehensive. Other groups on the other hand, were sheltered in the districts constituted of relatively cheap wooden construction houses built by building craftsmen. The trait of society partitioned into different divisions which are guided by religious functionaries, can be seen in the urban area. Within a social structure of each group lives in its own district, divisions are explicitly clear like Muslim districts, Armenian district and Jewish district. The manufacturing and retail shops of artisan-akhi groups in social organization were located into khans, caravanserais and covered bazaars. These buildings forming the commercial center of cities were built by the waqfs of wealthy families. The growth of center conditioned the growth of city. Public living in the districts were organized in kin-based groups. Therefore, the income difference in a district is understandable only with the size of houses. Briefly, it can be stated that the social and cultural structure of Ottoman city has determined the formation of physical environment.

Keywords: Ottoman City, Ottoman Socio-Economic Structure, Physical Structure of the Ottoman City

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I. INTRODUCTION

In the model of the Islamic City of Lapidus Grunebaum, where socio-economic and spatial relations are defined, it is mentioned that there are four categories of social organization. These categories are indicated as model; "*Emperorship or state organization, Religious communities* (community organization of different religious sects), *Artisan-Akhi organizations* (*Guilds* or in more general terms, associations of socio-economic professions) and *Districts* (*Neighborhood units of homogenous character in socio-economic and religious terms*) (Tosun, 1983, p.14)." This structure, seen in Islamic societies, began to be seen in Anatolia during the Ottoman period. In Muslim societies, such way of an organization, no matter urban or rural, it is possible to say that this form of categories constitutes one of the most important and most comprehensive social organization categories of social life at the regional scale. (Aktüre, 1978).

In addition to such categories in social structure, Lapidus states that the urban population consists of definite social strata. These social strata are not reflected in the physical structure of the neighborhood. Aktüre states that; "*spatial closeness is no necessary condition for solidarity among classes in any of the districts within urban space, and despite the homogenous structure in every level of social stratification, the districts bear heterogeneous characteristic such that the rich and poor may be living side by side* (Aktüre, 1978, p.7)."

Within the scope of this study, it is aimed to examine the Ottoman social and cultural structure based on the categories of Lapidus in the Islamic City model. In addition, physical environment will be explained and related institutions will be discussed. The neighborhoods, which are the basic unit of the Ottoman urban texture, will be examined in detail and the administrative and cultural structures of the neighborhoods and their place in the structural structure of the Ottoman city will be explained. The aim of this study is to show how the social and cultural structure of the Ottoman city played an important role in the design of the physical environment.

II. EMPIRE AND STATE ORGANIZATION

There are categorization of empire and state organization with different approaches. Mustafa Akdağ states that, the socio-economic stratification of the empire age city communities; the major social class of the city is the *âyan* (senators) and *eşraf* (notables of the city). These are people who have been assigned as vizier, *subaşı*, governor of sanjak, kadhi, *müderriş* (teacher in a *medrese*) and in similar duties in the past. The second class is members of the state. Teachers in *medrese*, *nazırs* (ministers) of *waqfs* (foundations), officials of finance, military chiefs and chief administrator policemen (*subaşı* and *asesbaşı*) are defined as members of government. At this point, it should be noted that kadhi is naturally above all levels. In the third level, there are the class of artisans and tradesmen. Trades sheikhs (head of a group of dervishes) and *yiğitbaşıs*, savants (“*üstad*”s, recognized experts), tradesmen are included in this class. It takes fourth place, workers and apprentices, groups of people in public who possess small vineyards and orchards or shops and can only afford making their living and the class of “*mürtezika*” who benefit from waqfs (Akdağ, 1995).

According to Kuban; the first component of the Ottoman society is the Muslim Turks. The second component is defined as non-Muslims, who have an important place in economic life, and the third component to the state as represented by the sultan, soldiers and administrative structure. Everything is under control of the state on top. Absolute dominance of sultan is at issue. A comparison with the Western world gives the impression that the state administration is very rigid. The class structure has yet been not developed. Almost no civil participation in state works. (Kuban, 1996).

According to Cerasi, the administrative hierarchy of settlements addresses to the following divisions: “*the center of sanjak or province governed by a pasha, as corresponding to a region or some wide locality in country; the regional center as corresponding to a small region including the place where the sanjak is and its environs or plenty of towns and cities; center of the administrative region consisting of small or medium sized towns in general* (Cerasi, 1999, p.57).” Aktüre mentions about a population of 40-50.000 for the centers of provinces, 20-30.000 for sanjaks and 5-10.000 persons for those places where there is *subaşı* (Aktüre, 1978) within this management hierarchy.

In administration of the city, the ulama class is of crucial value. A part of these people work for state as kadhi, *müderriş* (teachers in *medrese*) or mufti (official in charge of Islamic affairs for a province or district). Another group is listed in salary books of waqfs employed as *imam* (prayer leader), preacher or fiduciary of waqfs (Faroqhi, 2002). But “*the main official figure is the kadhi* (Cerasi, 1999, p.68).” Kadhi can be described as the Islamic judge who has the authority, in issues related with real estate reconciliations and problems concerning the municipality and the court. The kadhi has the highest position in these matters and works as an administrator appointed by the government. Every district is under control of a separate kadhi holding municipal responsibilities as well; some kadhıs try to expand their territories via inclusion of remote villages by appointing viceroys who well know about the locality to act as their proxies in a large district of kadhi or at a town distant from the court (Faroqhi, 2002). Kadhıs are assisted by the *muhtesip* leading an organization consisting of fifty-six police force. Works held by the *muhtesip*, *kethüda* (chief steward) and trustees are also under their control (Cerasi, 1999). Apart from these, there also exist other employees such as the *ihtisab* aghas, who are responsible for urban works, but are mostly in charge of the bazaar and shopping districts, *mimarbaşı* (chief architects) who are responsible for and control the buildings, and *subaşı*, who are responsible for and control the waterlines (Kuban, 1996).

The administration of Istanbul displays a special case, compared to other regions, because the levels of the state and municipality become one there. In Istanbul, the divan, the council of state, allocates every week a session for problems of the main center. During 16th and 17th centuries, the ulama class possessing a position as powerful as that of tradesmen and craftsmen in daily life of Istanbul also has the right to comment on administrative levels in priority. Işın indicate that; strategic positions to which those from the ulama class rise as Anatolian and Rumelian military judges (*kazasker*, a high official in the Ottoman judiciary), kadhıs of Istanbul, hodjas of Sultan, *müderrişes* of Süleymaniye, and kadhıs with *Mevlevi* positions.

III. RELIGIOUS COMMUNITIES

In Ottoman cities one of the important symbols of daily life in urban scale pertains to the mosque and *tekkes* (dervish lodges). The local masjids (small mosques not used for Friday noon prayers) in neighborhood units, and *küllıye* mosques (complex of buildings adjacent to a mosque) are important architectural structures in the holistic urban texture and they create a focus in the urban pattern. These places also undertake a social religious community. *Küllıye* can firstly be depicted as a prevailing symbol of worshiping culture that leaves its mark on the whole city. “*This symbol has been shaped according to a social organization model that shelters the main public facilities within its body* (Işın, 1991, p.65).” Functioning as some kind of a forum -usually located in western ancient cities- where the community gathers at specific time periods, the mosque takes the central location within the *küllıye*. *Küllıye* and mosques function like a communication center between the

palace administration and the public. Decisions concerning city life are announced to the community in these places. Thus, the mosque attains the quality of being such a social institution and the public order of daily life is kept under control on behalf of the palace. The operations of the mentioned control mechanism, is provided by the *külliyes* that execute educational and health facilities via various institutions they shelter and educate the administrators for bureaucracy. Another importance of the *külliyeye* is that it is a public space that meets the health and food needs of the people.



Figure 1-2-3: *Selimiye Mosque (Edirne), Sultanahmet Mosque (İstanbul) and Şehzade Mosque (İstanbul).*
Photographed by Hayriye Oya Saf

The *tekkes* were to present styles of daily life in a diverse set of alternatives in order to accomplish their roles of organizing the Muslim population for *tariqats* (Işın, 1991). *Tariqats* are bearing great importance in cultural structure of the society. It is important to know the activities of the *tariqats* in social, cultural and political fields, in terms of understanding the spiritual structure of Ottoman society (Kuban, 1996). In this context, it can be said the Ottoman state has tried to part the society into different divisions organized in cells where religious functionaries were to be guiding and was in search for a similar order for the non-Muslim public as well. While trying to maintain this order, the Ottoman state has tried to part the society into different divisions organized in cells where religious functionaries were to be guiding and was in search for a similar order for the non-Muslim public as well. According to Cerasi these “*ethnic-religious five groups were based on division of five nationalities called millet-i hamse: Roums, i.e., Roum-Ortodoxes and Slav Ortodoxes, Armenians, Catholic Armenians, Jews, and Catholic Latins.* (Cerasi, 1999, p.73).” The specified non-Muslim communities had limited autonomy used in different ways each.

IV. ARTISAN-AKHI ORGANIZATIONS (GUILDS)

One of the main features of the Ottoman cities is the formation of artisan-akhi organizations. The internal operations and rules of these organizations embodied as result of social and economic solidarity (Tosun, 1983) carry the traces of the Seljuk period. According to Kuban, the Ottomans have kept the elements pertaining to solidarity of the Islamic urban society. The most important one of these is the semi-religious guilds system (Kuban, 1996). The economical load of daily life is over the shoulders of artisan and craft guilds. Except for the soldiers and ulama class in the city, the presence of all the male population within these organizations, emphasize the importance of the guilds system for daily life. “*Artisan guilds are extensions of tariqats in daily practice* (Işın, 1991, p.85).”

Constructing their spiritual bases upon moral values, the guilds also include administrator positions each, for having control over these values and protecting the organization from degeneration. Those people who have the right to comment on issues within guild administration are the Sheikh, *Nakib*, *Duacı* (prayer), Sergeant, *Yiğitbaşı* and *Kethüda*. Under control of one savant for each one of the shops and manufacturing workshops specific to one crafts field. Every unit within this structure, apprentices work according to settled rules and function as schools educating master (of crafts) each. There are one Akhi, deemed as the head of savants in the same field of work. Akhis are also called artisan sheikhs or artisan *kethüdas*. *Kethüda* represents the Guild for the Palace. His assistant and chief of staff is the person who is the *yiğitbaşı*. The one with the highest volume of work among the akhis is given the position as the head of all artisan associations under the name “*akhi baba*” (Akdağ, 1995). The right to punish those artisans who sell goods of poor quality and who trade deceitfully belongs to *muhtesip*. As for the *muhtesip* who is responsible directly to the center, he is controlled by grand vizier. Control of the bazaar takes place among the duties of grand vizier as well. Whilst carrying out this duty, some officials like the kadhi of Istanbul on the lead, or agha of Janissary corps and *muhtesip* etc. also aid the

grand vizier. Generally, the bazaar controls in presidency of the grand vizier are usually held for making some inquiries in the market prior to making important economical decisions (Işın, 1991).

For every kind of crafts and artisan works in the city, there have been associations established for each one (Akdağ, 1995). In Işın's opinion, "as long as the economical dynamics shaping the daily life of the city have been kept under control of guild type of organizations, they could reflect, in a balanced manner, the circulation of materialistic and spiritual culture upon the urban pattern (Işın, 1991, p.63)." In this context, it would not be wrong to say that they created some focus point in the urban pattern. On the other hand, as places where the professional groups of artisans and craftsmen have settled, the khans and caravansaries have been so important in formation of commercial centers that were even as much determining as the bazaars as well. The khans provide an environment convenient for transfer of professional knowledge and culture between artisan groups as members of different communities (Işın, 1991). In this respect, they are important for social and cultural integration.

There appear to be two different factors, which determine the social status of artisan tradesman class within the daily life, worth consideration. The first factor is based on religion and classifies the artisan groups according to the communities they belong to. In this manner, the civil life of any artisan group remains limited to the boundaries of the district allocated to them. As for the second factor, which is completely based on practical reasons, it classifies the artisan groups only according to the professions they represent, without taking account of the religious communities they belong to. For this reason, groups of different religious communities come together in daily life only on basis of their professional careers. The artisan-tradesman classes encountering the basic needs of daily life are active in two major sectors. The first one of these is the food and fuel sector upon which the minorities dominant, and the second one is the sector of textiles and fabrics. The raw materials of the second sector are as well supplied by minority tradesmen in the maritime industry. As for the manufacturing of various house tools and equipment, with textiles taking the lead, it is, to a great extent, realized by Muslim craftsmen. Roums have an effective role in ship transportation. Armenians and Jews have superiorities in processing valuable mines (Işın, 1991). The organization ways of particularly the artisan-tradesmen class can be regarded as influential upon physical structuring of the Ottoman urban pattern.

V. PRODUCTION OF PHYSICAL ENVIRONMENT

5.1. Public and Private Constructions

It is possible to classify the buildings of the Ottoman urban texture into two as public and private. Products of public architecture usually have been of monumental character and they stand out in the urban pattern. These buildings are usually made of stone. The orderly processing of ashlar that were used in monumental buildings has been considered very important. It has been observed that materials taken out from the old buildings were sometimes used in monumental buildings as well. According to Faroqhi, the reason for this is neither the cheapness of the materials nor that they could be found easily, but their values with high symbolism worth being considered as antique. One can also run into 'çini's (piece of earthenware decorated with opaque colored glazes and motifs that are characteristic of Turkish art) as material of ornamentation. The surfaces of most public-monumental buildings are sheltered by lead-coated domes. However, until the 15th century, it is also occasional for the domes to be coated with brick (Faroqhi, 2002).

In private buildings called civil architecture, on the other hand, the dominance of local materials is at issue. Stone is used only in regions with inadequate amounts of trees where there exists no cheaper material than stone, or in regions like *Ürgüp* where the stones are especially smooth to be easily processed. In Western Anatolia, Black Sea region and Istanbul, the materials used in construction of houses are mostly timber. In inner regions, where wood is very expensive, the bay work (half-timbered) construction technique has been developed. Similarly, in inner regions, the use of adobe is also common, only the carrier elements and the roof are built of wood. Due to the arid climate, the roofs of the houses are mostly flat and the summers are used as terraces. In coastal lines and the forestry areas, roofs are usually pitched and covered with thin wooden slabs called "*padavra*" (shingle roof) or roof tiles (Faroqhi, 2002).

Almost all of the private constructions to be held in a city depend upon permission of that city's kadhi. The kadhi would give technical control responsibility to an architect or master builder assigned by him and supervision of the construction. The construction taxes were collected by the building fiduciary. As for the monuments to be built for purposes of public benefit, their constructions were realized with the support of private persons and foundations (waqfs) (Cerasi, 1999). In the city, the control mechanism was operating for all constructions. In this context; "*D'Ohsson (1878) speaks of frequent land surveys and merciless controls made to prevent illegal constructions (Cerasi, 1999, p.68).*" Many firmans of the Ottoman period determine the heights and distances of buildings from mosques and buildings to be preserved. However, these rules were often seen to be not obeyed. Detailed building regulations could be put into effect by the beginning of 19th century only. We have no knowledge concerning the extent to how much influential these decrees have been in particularly the

provinces. Nevertheless, until the period between the 18th and 19th centuries, the limiting norms related with the heights of buildings as determined by different regulations of the housing pattern appear to have been kept (Cerasi, 1999).

5.2. Architects

One of the differences between civil architecture and the public architecture is that in public buildings, the name of the responsible architects were known, whereas in private buildings, unknown. Here is not much information about Ottoman architects. *Mimar Sinan*, *Atik Sinan*, *Davud* and *Mehmet Agha* are some of the very well-known architects. Not all of the Ottoman architects are *anonymous craftsmen* loyal to the commands of palace bureaucracy and insisted rules of the guilds. Contrarily, some are known as respectful people who have been so influential that their words were regarded as commands (Faroqhi, 2002).

The splendid buildings of the period are known to be constructed mostly at Istanbul and its environments. Following the designing of the projects demanded by the padishah or members of his family, the project is approved firstly by the *mimarbaşı* (chief architect) and then presented to the padishah. Another procedure belongs to those buildings to be constructed outside Istanbul where a young architect is to be assigned for the control of the construction site. Urban architects are above all seen to have instrumental roles in providing for the bureaucratic control of central authority upon the cities in the provinces. Those architects who have been assigned by the central government are trained usually in the Hassa Architects Center, the organization of which has continued until the beginning of 16th century. Urban architects were charged with control of all craftsmen engaged in construction works. A private construction in the countryside could not have started without the approval of the urban architect. The urban architect would sometimes bring standards to construction material (Faroqhi, 2002). By this way, the buildings to be constructed in the provinces were kept in conformity with the style of the capital.

In the Ottoman period, regulations have been set forth for especially the new houses to be constructed in Istanbul as involving such rules that resemble today's "*municipal construction bylaw*". For example; dictate upper floors with projections not to cover the street. The stone counters placed in front of the houses not to exceed specific limits. These rules should be within knowledge of constructors and the architects. When necessary, one can refer to the registry books of kadhi. The urban architect would also assist kadhi in resolution of conflicts concerning the construction activities and the buildings. In addition, the money paid for the government by craftsmen working, in construction business were also collected by the urban architect. The word architect comprises not only the architects in the known sense, but also the master builders of lower level, because the houses are constructed not by architects educated mostly from the Hassa Architects Center, but by *dülgers* (carpenters) or bricklayers working together with the property owner (Faroqhi, 2002).

5.3. Institutional Framework of Building Activity: Waqf

"*Waqf is an institution managing the charity buildings to be constructed with the financial support of a private donator* (Cerasi, 1999, p.74)." According to Kunter, the waqfs (foundations) were responsible for ethical or religious activities or a wide range of aid activities including distribution of firewood and coal to poor people, collection of signatures for the naval force, and purchase of trousseau for poor brides and for construction and management of public buildings such as the mosque, school, *küllüye* etc. (Faroqhi, 2002).

From an institutional point of view, all waqf buildings were religious foundations. These waqfs, of which the frameworks have been drawn according to Islamic law that has taken its final shape during the 7th and 8th centuries, have functioned within the same framework in the Ottoman period as well.

VI. DISTRICTS

The district is an urban institution that makes up an integrated whole with its social and physical structures both. The social context of the city is divided in between the mosque and *küllüye*, bazaar and palace. The district, as an urban institution with housing texture, reflects a social structure that corresponds to family existence and its relations. The mosque and the surrounding buildings stand for a more widespread social context in this texture. The bazaar that creates the environment for exchange of goods and the palace that brings rules pertaining to the ways of behavior function as catalysts each. In Ottoman cities, the physical development of Ottoman cities, seem to be established through erection of new districts. It is possible to find parallelisms between the overall development process of the Ottoman social structure and the formation of neighborhood units in cities (Kuban, 1996).

Homogenous groups consisting of migrants from villages, nomad communities and other regions have established new districts by settling communities with less number of families according to their ethnical origins or being of the same social, professional or religious groups. In the community, there is often a founder. This

person stands out as a religious leader or a figure respected for his wealth or authority (Cerasi, 1999). The first districts are conspicuous as small scale settlement units constituted by community-type of organizations. These districts have taken their names usually these people are authority figures (Işın, 1991). In new districts, people have constructed their houses at a location nearby a place of worship or a religious complex. Therefore, scattered texture is rarely seen on maps in residential areas. The vacancies within the settlement pattern of districts have been filled with flows of migration later (Cerasi, 1999).

Another point taken into consideration during structuring of the district is the arrangement of population balance as the fundamental component of daily life. The city is also thought to shelter qualified population who are members of different religious communities having resided there through exile. In result, the settlement of crafts masters and of those families who have the right to comment on both administrative and religious issues has been maintained so that it would firstly aid in economic development of the city. The placement of Muslim and Christian communities in separate neighborhoods has led to the emergence of a neighborhood culture that has marked the daily life.

The districts are shaped according to a centralist structuring model. Muslim districts are administratively dependent upon the *imam* (Işın, 1991). The by-laws related to districts are based on religion. The *imam* of the mosque, who is vested with the authority in property, municipal and legal issues, has been the highest authority of the district until 1829 (Cerasi, 1999). The extent of *imam*'s authority is not limited with administrative issues and he is deemed as the only person responsible for fundamental matters of daily life (Işın, 1991). He also undertakes the duty of referee in civil discussions of secondary degree (Cerasi, 1999). In addition, it has the authority to sanction the residents of the neighborhood. The *imam*'s role in Muslim districts, are played by priests in Christian districts and rabbis in Jewish districts (Işın, 1991). In 1829, until when *imam*'s delegated powers have begun to exceed the given limits and thus create pressure, an enacted law has declared foundation of village council where the imam had to be accompanied by two mukhtars. Those people elected by family leaders of the district (Cerasi, 1999).

In the classical period, security is important for the districts. In administration of the district, the *Pazvants*, acting as policemen also called '*Pasbân*'s, in other words, the salaried watchmen are worth notice as well. These people act administratively in connection with district *imams*. Another point, which is, as much essential as providing for security in district of the classical period is to have the life standards be kept at a specific level in economical terms. In this context, the most noteworthy arrangement is the establishment of the *Avarız* chests, which are financed by people who are considered to be a kind of social assistance fund and who are in good condition. These large chests constitute the actual source of all aiding expenses, including credits of low interest rates given as proportionate to the need as well as caring of the poor ones, widows and orphans (Işın, 1999).



Figure 4-5-6: Images from Safranbolu City Center
Photographed by Hayriye Oya Saf

When it comes to physical structuring of the districts, there exist some mechanisms determining their structures and formal characteristics and these have been kept unchanged for centuries. At the center of the Muslim district take place the mosque-masjid. Although the district center displays distinctive qualities due to placement of the mosque there, there are residential areas developed around such buildings as turbeh (large, usually domed tomb), Turkish bath, fountain, or school etc. as well. The districts of Christian and Jewish communities have similarly resided at the surrounding areas of churches and synagogues and to a great extent, have realized their cultural organizations with the influence of these religious centers (Işın, 1991). To “mark” the geography of its own is the duty of the district center. The fountain, small square, masjid or if the district is large enough, the mosque, school and café (“*kahvehane*”, serving only coffee, tea or soft drinks) all play a determining role in the center of district (Cerasi, 1999). “*Having never extended over too much of an area, the district consists of several tens of or one or two hundred houses. Ayverdi and Aktüre speak of an average of population changing between 150 to 2000 people in Istanbul and the seven Anatolian cities of the provinces*

(Cerasi, 1999, p.72).” The districts function as small urban villages sheltering common and public places like the worship place, school, library, food shops, fountains and sometimes a Turkish bath as well as administrative structures that have yet not completed their development (Cerasi, 1999).



Figure 7-8-9-10: Examples of Street Texture from Ottoman Cities (*Edirne, Kütahya, Bursa*)
Photographed by Hayriye Oya Saf

The districts consist of main streets extending to city centers as well as many dead-end streets. As a typical feature of Islamic cities, this phenomenon can to a great extent be related with the previously mentioned concepts of property and family immunity in Islam. The dead-end streets functions far from being a street, as rather a passage providing access to one or several houses. Except for the areas around the masjid or fountain, there exists no planned public urban space. In the internal organization of the districts, the principles of the Muslim social order were influential. The first one of these principles is mutual respect for property. In this context, the first settlers are given priority. They were not allowed to have their houses built in a way as to block the scenery of the previously built houses, open any window or have a balcony that will be facing the interior of those houses and would not also be impeding access to their doors. As for the second principle, it was the intimacy of the household. Privacy necessitates living immunity and houses to be built physically enclosed (Kuban, 1996).



Figure 11-12-13-14: Examples of Ottoman Houses (*Birgi Çakırağa Mansion, Kütahya Houses, Muğla Karaosmanoğlu Mansion, Trilye-Bursa Houses*) Photographed by Hayriye Oya Saf

In Ottoman society, the cell of urban living is the family. No other institution has had such an impact upon the social and physical conditions of urban life. Houses as the fundamental component of city’s physical form that can be defined as living unit of the family, have created a unique architecture under the name Ottoman house. In this context, it can be said; “*The fundamental component in the physical form of the city consisting of organic clustering of districts is the house* (Kuban, 1996, p.194).” Except for the palace buildings, the house has never been designed as an expression of the owners’ wealth, nobility or splendor in the Ottoman society. In functional terms, the self-development of plans imply emergence of typical street organizations. Another unique characteristic of the Ottoman cities is the walls with no window openings on ground floors of the houses, at the backside of which take place wide spaces used for various functions. Until the 19th century, the ground floors have been designed either without any or with one-two small windows. Although the houses differ in scientific terms and in terms of construction techniques and ornamentation, the structural layout of residential areas have definitely not changed. The most evident characteristic of Ottoman cities during the pre-industrial era pertains to the residential area organizations consisting of the layout of houses with courtyards and gardens. Following the first period of migration, such structural change mechanisms as earthquakes, fires or construction of large *külliyes* and palaces must have caused the emergence of diverse variations in garden and house relations. However, as the first reliable maps date to 20th century and as there exists no other documents other than several miniatures displaying the physical relations between the house and garden during the early periods, we have only a few information regarding this change and the spatial organizations at issue (Kuban, 1996).

VII. CONCLUSION

Four categories of social and cultural structure of Ottoman city, which are state organization, religious communities, Artisan-Akhi organizations and districts, has clearly shaped the development of physical environment. Palaces, mansions, big mosques and *kiilliyes* representing the power of administration staff such as vizier, *subaşı* and governor of sanjak who is the top of emperorship or state organization, are the focal points of Ottoman cities. An architect designs these buildings which are of stone construction, costly and building organization is comprehensive. Other groups on the other hand, were sheltered in the districts constituted of relatively cheap wooden construction houses built by building craftsmen.

The trait of society partitioned into different divisions which are guided by religious functionaries, can be seen in the urban area. Within a social structure of each group lives in its own district, divisions are explicitly clear like Muslim districts, Armenian district and Jewish district. House characteristics are different as well. Whereas the Muslim house is a garden house, wooden construction and its roof has long eaves, non-Muslim house is a row house, stone construction and the roof does not extend outside from the facade line. However, house characteristics are merged to each other at the boundaries of districts, so the partitioning disappears. For instance, the upper floor with projections in Muslim house is a similar building component with the upper floor with bay windows in non-Muslim house.

The manufacturing and retail shops of artisan-akhi groups in social organization were located into khans, caravanserais and covered bazaars. These buildings forming the commercial center of cities were built by the waqfs of wealthy families. Establishing a waqf and building a mosque, a khan, a Turkish bath and a covered bazaar has been a strategy of urban development. The growth of center conditioned the growth of city.

Public living in the districts was organized in kin-based groups. Therefore, the income difference in a district is understandable only with the size of houses. Wealthy family house is adjacent to a low income family house in a district. The building system with the walls which are made of mud-brick infilled wooden construction, of one story or two stories upper part onto stone construction ground floor walls is the same in both houses. But, the wealthy family houses are usually three stories and the number of rooms are more. Ground floor is for the storage, servants live on the first floor, the patriarch and household live on the second. A number of *revzen*, the window at the upper part of dual windows order, is the indicator of richness, since they are very expensive. Similarly, ceiling ornaments in rooms, *çini* applications on the walls, hand-drawns, detail and ornament precision of fireplaces, cupboards and doors, all refer to how much the family is rich. As the last word, it can be stated that the social and cultural structure of Ottoman city has determined the formation of physical environment.

VIII. REFERENCES

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THE CAUSES THAT MAY LEAD TO THE BALANCED SCORECARD'S FAILURE: “AN EXTENDED FRAMEWORK FOR A CRITICAL REVIEW”

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ABSTRACT

This paper aims to identify the limits of the Balanced Scorecard (BSC) providing researchers and practitioner the way to manage critical issues connected to the BSC. In doing so, we identify and analyze the limits from both a theoretical and a managerial perspective. This discussion is useful to explore the status of research on the BSC, with a view to identifying gaps and to sketch ideas, providing scholars and practitioners with the basis for further research in order to overcome limits and improve the current use of the BSC. We reviewed articles published in 429 journals, in 22 different subject areas of the Academic Journal Guide (ABS). Knowledge gaps in existing BSC research are identified, leading to consideration of several ideas for future research. Interviews were conducted with the managers of large Italian companies to link the conceptual framework to a practical point of view. The limits of the BSC are discussed with a positive purpose to build, in order to examine the conditions under which the BSC may be effective. The research suggests that the conceptual framework provides a useful research tool for those wishing to study the design and operation of Performance Management System (PMS) by providing a template to help overcome the problems of such systems. To this end, we created a new perspective, called *Critical perspective* that allow considering and containing the limits of the BSC. The findings of this paper are presented in three parts. First, the reviewed articles are categorized by topics, research settings, theories, research method, and primary data analysis technique. Second, a conceptual framework was created and knowledge gaps in existing BSC research identified, leading to consideration of several ideas for future research. The last section offers our final remarks.

KEYWORDS: balanced scorecard, critical perspective, limits, performance management

INTRODUCTION

The purpose of this paper is to analyse the progress made by academia in the Balanced Scorecard's (BSC's) limits domain in the last 26 years, adopting a systematic approach in order to understand the possible causes that could lead to BSC failure. In particular, the goal is to provide a basis for future research in order to eliminate the problems related to the BSC and so improve the performance of companies. To this end, a systematic literature review (SLR) of 99 papers has been conducted. The BSC aims to remedy the limitations of traditional monitoring models, as well as translate the competitive strategies into key performance indicators (KPIs) (scorecards) ensuring a balance between short-term performance, measured through financial parameters, and those non-financial factors that should lead the company to superior competitive performance and sustainability over time. The BSC provides the foundation for successful strategies and effectively managing change in a company. It often involves significant changes to organizations and requires that they be developed and that new corporate policies and procedures are introduced. For many companies, these changes can be problematic. For this reason, it is essential to devote considerable attention to the company's preparation for the change and gradually introduce the system. It is also important to identify the most suitable metrics to represent the operation of the business and its value creation capacity. One of the main reasons for method failure, in fact, is represented by the decision to delegate the construction of the BSC to a specific committee and make it operational without the necessary commitment from managers who must then try to implement it in order to reach their goals.

The research results provide a basis for further work to reduce the existing gaps in performance management. To sum up, we can conclude that through the weaknesses and limitations we can be aware of what the impact is of these on the performance management tools, as in the case of the BSC. In particular, we identified, thanks to

managers and literature a new perspectives, called *Critical Perspective* that allow us to consider and contain the limits during the implementation and following process of the BSC.

The criticisms noted here thus challenge some key assumptions of the BSC. Previous studies have added significantly to the richness of the debate regarding the BSC's limits. As also discussed, several researchers have pointed out limitations of the BSC concept and of research in the field. (Nørreklit 2000; Braam and Nijssen, 2004; Malina, Nørreklit and Selto, 2007; Hoque, 2014) This debate opens up opportunities for future research, as outlined next.

In the next sections, we briefly summarize the prior research findings; we then describe our research methods and discuss the research results. We finally draw on the main conclusions from this work for proposing potential avenues for the research agenda within this field.

1. METHODOLOGY

Based on Tranfield et al. (2003) we have looked at the topic through a systematic review of the literature (SLR). Based on the traditional SLR process, we established the following set of research criteria:

1. We identify the papers that focus on the BSC by direct search on journals' websites. We chose the Business Source Premier (EBSCO), ABI/INFORM and Ingenta (including ScienceDirect) as the research databases in order to download the pdf file if the full text was not available on the journal's website. The focus of our review was on publications that explicitly concentrated on the BSC. First, we found the main important ranking of journals that are classified in rate 4 and 3 ratings (Top quality). Our literature search began using the terms "Balanced Scorecard", "BSC", "Performance Management" and "Performance Measurement". The first two words were chosen because they represent the focus of the research. Papers which talk about the BSC of course contain these words. The other two words were included because, in their work Kaplan and Norton gradually moved from defining the BSC as a comprehensive performance measurement system (PMS) (in 1992) to the BSC as a strategy implementation tool to facilitate and control performance measurement and management. For these reasons, we chose to analyse all performance management and performance measurement papers.
2. After having established that articles had to be written in English and published in peer reviewed journals in the time period 1992-2016, we ensured their substantive relevance by requiring that the articles contained BSC^ or Balanced Scorecard^ or Scorecard^ as keywords in their abstract, title or keywords. **(Appendix a)**
3. Rigorous inclusion and exclusion criteria were defined. Regarding the inclusion criteria, we decided to include in our research theoretical, qualitative and quantitative papers published in management and sociology journals. Regarding the exclusion criteria, we decided not to consider books, chapters in books, books reviews, practitioner papers, conference proceedings, working papers, reports, and other unpublished works.
4. We used another criterion in order to select all the articles that talked about the limits of the BSC. We focused on the step 1 papers selected, in order to identify only those papers facing the limits of the BSC. First, we identified criteria that allowed us to select papers in our sample. We gave a definition of the term "limit".

According to the Cambridge Dictionary a limit is a:

"particular part or quality that is not good or effective, a quality or feature that prevents from being effective or useful"

The definition and meaning that we chose, to have a fair view in our selection, is not confined simply to only a word, but we take the negative acceptance of the meaning in all its sense; for this reason we selected a series of synonyms that concern the term and that gave us the idea of a limit. **(Appendix b)** We selected the most frequently mentioned synonyms and used them. Therefore, we chose to verify for each paper, if there was the word 'limit' and also identify its synonyms. We put them into the search bar; this step was only to see if the articles had some paragraph(s) that would be of interest to us. Therefore, we used search criteria, which was limit's definition, in order to understand if the paper talked about the limits of the BSC. If unsatisfied with this criteria, we began a more detailed search, beginning by analysing the title, abstract and conclusions; if still unsatisfied with that, we continued to read more carefully all the paragraphs inside the article in order to catch some connection with the purpose of our research. Finally, if none of these searches let us find what we needed inside the article, we rejected that paper. After all this process of selection, we arrived at the conclusion that the papers selected talk about the limits of the instrument. Papers collected represent our sample for answering our research question.

5. Following the framework of Shields (1997), which was also used by Chenhall and Smith (2011) and Hesford et al. (2009), the published articles were classified by (a) topics, (b) research settings, (c) research theories, (d) research methods, and (e) primary data analysis techniques. We used percentages

relating to all these five categories. We then reviewed the selected articles to illustrate the state-of-the-art on the BSC's limits.

6. All papers facing the limits of the BSC were analysed, in order to identify literature evidence in this field. We selected all limits and used them to create several kinds of clusters, which represent the different limits identified by the literature.
7. In the final part, in order to link the literature to management practice, we provided an empirical analysis of BSC's limits using a survey conducted with managers of large Italian companies.

We reviewed articles published in 429 journals, in 22 different subject areas of the Academic Journal Guide (ABS). (**Appendix c**)

Table 1 shows the results from our search. In particular, this table outlines the outputs from phases 1 to 3. In order to analyse the papers, a two steps analysis has been conducted. Firstly, by manually sorting four papers' dimensions, namely: a) the authors, b) the individual paper's keywords, c) the paper's research question(s), and d) the year, we have identified codes for each paper. Secondly, we have regrouped coherent codes into several themes related to the Research Topics.

Table 1: Summary of the results

<i>Description</i>	<i>Total</i>
All articles examined limited to title, abstract and keywords	26,702
All articles containing at least one of three keywords in their title, keywords or abstracts	292
All articles facing the limits of the BSC	99

Source: our elaboration on the data set

2. HOQUE'S ANALYSIS

In order to analyse the papers, we used an analysis introduced by Hoque (2014). Then following his framework, also used by Shields (1997), Chenhall and Smith (2011) and Hesford et al. (2009), the published articles were classified as follows:

1. topics
2. research settings
3. research theories
4. research methods
5. primary data analysis techniques

During the 25 years under study, 91 of the 99 articles (92%) on the subject were published in 2002–2016. No articles on the BSC limits were published between 1992 and 1996, primarily because of its early stage in practice. Overall, the highest number of articles (10) appeared in Management Accounting Research, one of the premier journals in management accounting.

A) The Research Topics

Table 2 shows the frequency distribution of BSC topics for the 99 articles published during the period under study. More than 31% of all articles on the BSC limits focused on BSC Adoption/Implementation. About 24% were in the areas of review and critical analysis, 16% were on BSC (general), and about 11% were on performance management. Others focused on impacts on employees' mental states (4%), uses in decision-making (2%), causal relationship effects (1%) and incentive plans (0%). Although future research might explore these aspects further in different contexts, there might also be an increasing interest in linking these aspects with other strategic management tools.

Table 2: Frequency distribution of articles on the balanced scorecard published by topics

Years	1992 - 1996	1997 - 2001	2002 - 2006	2007 - 2011	2012 - 2016	Tot.	Tot. %
Performance Measurement	0	1	3	3	4	11	11.1
Impacts on employees' mental states	0	0	1	2	1	4	4.0
Organizational effectiveness	0	0	3	1	3	7	7.1
Adoption/implementation	0	3	8	14	6	31	31.3
Balanced Scorecard (general)	0	1	5	9	1	16	16.2
Review and critical analysis	0	2	9	8	5	24	24.2
Uses in decision making	0	0	1	0	1	2	2.0
Employee incentive plans	0	0	0	0	0	0	0.0
Diffusion of the balanced scorecard	0	1	2	0	0	3	3.0
Cause-effect relationships	0	0	1	0	0	1	1.0
Total	0	8	33	37	21	99	100

Source: our elaboration on the data set

B) Research Settings

About 28% of the reviewed articles (28 out of 99) did not explicitly mention the research setting. The popular choices of settings were Services Private Sector 15 out of 99 (banking, insurance, airlines) (15%), Manufacturing 11 out of 99 (11%), Marketing and retailing 9 out of 99 (9%).

Table 3: Frequency distribution of articles on the balanced scorecard published by research settings

Years	1992 - 1996	1997 - 2001	2002 - 2006	2007 - 2011	2012 - 2016	Tot.	Tot. %
Accounting Firms	0	0	1	1	0	2	2.02
Services Private Sector (banking, insurance, airlines)	0	1	5	3	6	15	15.15
Govenaments Departments/agencies	0	0	0	2	0	2	2.02
Manufacturing	0	2	1	5	3	11	11.11
Marketing and retailing	0	1	3	2	3	9	9.09
Publicly traded listed companies	0	0	5	3	2	10	10.10
Local governments/municipalities	0	1	1	2	0	4	4.04
Private hospitals/healthcare	0	0	0	2	2	4	4.04
Not-for-profit/non-government organizations	0	0	1	2	1	4	4.04
Nil/not stated	0	3	13	9	3	28	28.28
Other	0	0	3	6	1	10	10.10
Total	0	8	33	37	21	99	100

Source: our elaboration on the data set

C) Research theories

According to Hoque, Table 4 shows that the articles published in the period 1992–1996 did not draw upon any theories. Most of these publications were by Kaplan and Norton and focused on developing and refining the concepts of the BSC. Subsequently (since 1997) scholars became interested in understanding BSC practices using

a wide range of theoretical perspectives. About 28% of the reviewed articles (28 out of 99) did not explicitly mention the research theories. More than 15% of all articles on the BSC limits focused on Critical (general), about 11% of all articles focused on Stakeholder theory, and about 8% focused on Organizational behaviour.

Table 4: Frequency distribution of articles on the BSC published by theory

Years	1992 - 1996	1997 - 2001	2002 - 2006	2007 - 2011	2012 - 2016	Tot.	Tot. %
Psychology	0	0	1	4	0	5	5.05
Contingency	0	0	0	1	3	4	4.04
Institutional	0	0	1	1	0	2	2.02
Economics	0	0	0	0	0	0	0.00
Critical (general)	0	1	7	6	1	15	15.15
Multiple theory/Triangulation	0	0	1	3	0	4	4.04
Cultural (national and organizational)	0	1	2	1	1	5	5.05
Agency	0	0	1	2	2	5	5.05
Stakeholder theory	0	1	2	4	4	11	11.11
Grounded theory	0	0	0	0	1	1	1.01
Organizational behaviour	0	0	3	4	1	8	8.08
Actor network theory	0	0	0	1	0	1	1.01
Innovation diffusion	0	1	1	0	0	2	2.02
Historical	0	0	0	0	0	0	0.00
Constructivist Approach	0	0	0	0	0	0	0.00
Other	0	0	4	3	0	7	7.07
Nil/Stated	0	4	10	7	8	29	29.29
Total	0	8	33	37	21	99	100

Source: our elaboration on the data set

D) Research methods

Data presented in Table 5 reveal that case/field study methods were the most frequently used, with 28 articles (28.28%). This was followed by the survey method with 23 articles (23.23%), and the analytic method with 15 articles (15.15%). A large number of the articles used quantitative research methods. The most common method was a mail-out survey using questionnaires, as seen in studies by Hoque and James (2000), Ittner and Larcker (2001), Maiga and Jacobs (2003). Researchers have also chosen qualitative approaches such as face-to-face interviews, participant observation and content analysis.

Table 5: Frequency distribution of articles on the balanced scorecard published by research methods used

Years	1992 - 1996	1997 - 2001	2002 - 2006	2007 - 2011	2012 - 2016	Tot.	Tot. %
Case/field study	0	2	6	10	10	28	28.28
Survey	0	3	7	10	3	23	23.23
Behavioural experiment	0	1	3	5	2	11	11.11
Analytic	0	0	7	4	4	15	15.15
Mixed methods	0	0	3	4	1	8	8.08
Action research	0	0	1	0	0	1	1.01
Archival	0	0	1	3	0	4	4.04
None	0	2	5	1	1	9	9.09
Total	0	8	33	37	21	99	100

Source: our elaboration on the data set

E) Primary data analysis techniques

Content analysis was the most widely used in the Qualitative method with 14 articles out of 99 (14%), and Regression/ANOVA/MANOVA and Descriptive statistics/correlations were the most widely used in the Quantitative method with 21 articles (in total).

Table 6: Frequency distribution of articles on the balanced scorecard published by primary data analysis technique

Years	1992 - 1996	1997 - 2001	2002 - 2006	2007 - 2011	2012 - 2016	Tot.	Tot. %
Qualitative							
Case/field study	0	1	2	5	1	9	9.09
Content analysis	0	1	7	4	2	14	14.14
Archival analysis	0	0	0	0	0	0	0.00
Participation/observation	0	3	3	6	1	13	13.13
Grounded theory	0	0	0	0	0	0	0.00
Quantitative							
Regression/ANOVA/MANOVA	0	0	6	8	7	21	21.21
Descriptive statistics/correlations	0	1	3	8	9	21	21.21
Mixed methods (qualitative and quantitative)	0	0	1	2	0	3	3.03
Other	0	0	3	0	0	3	3.03
PLS/SEM/Path Analysis	0	0	1	2	1	4	4.04
Nil	0	2	7	2	0	11	11.11
Total	0	8	33	37	21	99	100

Source: our elaboration on the data set

3. FINDINGS

After putting the keywords into the search bar, we obtained 26,702 papers. Then, after applying our first search criteria, in order to identify papers which focused on the BSC, we obtained 292 articles. Finally, we focused on these papers selected in order to identify only those papers facing the limits of the BSC and we obtained 99 papers. The selected papers, published in high quality journals have been carefully analysed in order to investigate the progress made by academia into referring to the BSC's limits. In fact, the findings of our first step can be

summarized by Areas Frequency Distribution. Table 7 presents a sample of evidence collected from the SLR. For each area, we identified the number of journals selected, the ranking of the journal, papers found using the keywords, papers selected on the basis of our search criteria and finally, the percentage of papers selected/found for each area. For example, it can be seen that the area of accounting contains the highest number of papers that focused on the BSC. Papers found were 3,553 and papers selected were 97. In this area, we analysed 27 journals, including 21 journals classified as 3* rated, and 6 journals classified such as 4* rated. For each area the keywords were used in order to find BSC papers. The top quality journals, 4*, have provided 22 papers, which focus on the BSC. In particular the journal with the highest number of papers provided is “Accounting, Organization and Society” with 10 papers, 45.45% of the total 4* journals. All papers were identified with the keywords “Balanced Scorecard”. With 3* rated journals, we analysed 21 journals and they provided 73 papers which focus on the BSC. In particular, the journal with the highest number of papers provided is “Management Accounting Review”, with 24 papers, 24.70% of the total 3* journals, and in this case there were several journals without papers found. The greatest number of papers has been identified with the keyword “Balanced Scorecard”. (**Appendix d**).

Table 7: Areas Frequency Distribution

AREAS	JOURNALS SELECTED	RATE 4	RATE 3	PAPERS FOUND	PAPERS SELECTED	PERCENTAGE %
ACCOUNTING	27	6	21	3553	97	2.75%
BUSINESS HISTORY AND ECONOMIC HISTORY	7	2	5	962	1	0.1%
ECONOMICS, ECONOMETRICS AND STATISTICS	91	23	68	1004	3	0.3%
ENTREPRENEURSHIP AND SMALL BUSINESS MANAGEMENT	8	3	5	170	9	5.29%
FINANCE	37	8	29	1064	3	0.28%
GENERAL MANAGEMENT	17	7	10	1442	10	0.695%
HUMAN RESOURCE MANAGEMENT AND EMPLOYMENT STUDIES	15	5	10	1129	12	1.06%
INTERNATIONAL BUSINESS AND AREA STUDIES	9	2	7	286	1	0.35%
INFORMATION MANAGEMENT	21	4	17	1226	29	2.37%
INNOVATION	4	2	2	571	6	1.05%
MANAGEMENT DEVELOPMENT AND EDUCATION	4	1	3	435	1	0.23%
MARKETING	20	8	12	1058	5	0.47%
OPERATIONAL TECHNOLOGY MANAGEMENT	12	3	9	2676	17	0.64%
OPERATIONAL RESEARCH AND MANAGEMENT SCIENCE	27	5	22	1986	34	1.71%
ORGANIZATIONAL STUDIES	9	5	4	610	0	0%
PSYCHOLOGY (ORGANIZATIONAL)	21	7	14	1973	6	0.3%
PSYCHOLOGY (GENERAL)	20	7	13	174	0	0%
PUBLIC SECTOR AND HEALTH CARE	13	3	10	2859	6	0.21%
REGIONAL STUDIES PLANNING AND ENVIRONMENT	14	2	12	647	11	1.7%
SECTOR STUDIES	15	5	10	1192	16	0.34%
SOCIAL SCIENCE	36	9	27	639	2	0.31%
STRATEGY	4	1	3	1066	19	1.78%
TOT	429	118	311	26.702	292	100%

Source: our elaboration on the data set

Using our second search criteria for screening papers, we selected 99 papers that highlight the limits of the BSC. We reviewed the 99 articles and found only in 12 areas of business and management journals that explicitly talked about limit. The highest number of articles was found in the Accounting area (55%) (**Appendix e**) followed by the ‘Operations research and management studies area’ (17%); all the other areas resulted in low percentages. Certain other areas such as ‘Strategy’, ‘Sector Studies’ and ‘Regional Studies Planning and Environment’, also featured very few articles on the BSC. Table 8 summarizes our results.

Table 8: Frequency distribution of articles by area

AREA	Paper selected	% of the total
ACCOUNTING	52	53%
GENERAL MANAGEMENT	3	3%
INTERNATIONAL BUSINESS AND AREA STUDIES	1	1%
INFORMATION MANAGEMENT	4	4%
HR MANAGEMENT AND EMPLOYMENT STUDIES	1	1%
OPERATIONS RESEARCH AND MANAGEMENT SCIENCE	16	16%
ORGANIZATION STUDIES	1	1%
PSYCHOLOGY(ORGANIZATIONAL)	2	2%
PUBLIC SECTOR AND HEALTH CARE	2	2%
REGIONAL STUDIES PLANNING AND ENVIRONMENT	5	5%
SECTOR STUDIES	7	7%
STRATEGY	5	5%
TOT	99	100%

Source: our elaboration on the data set

Finally, we selected all limits found and used them to create several kinds of clusters, which represent the different limits identified in literature.

In order to identify the different kinds of limits, we physically examined all papers, according to our research criteria, and for each paper we selected the parts which talked about the limits of the tool. Then, we analysed each part and classified it in a specific category that represented clearly the limit identified and also all other limits homogeneously, then the homogeneous limits found have been included in the same category.

4. KEY ASSUMPTIONS OF THE BSC

4.1 The limits identified by the literature

An aim of the analytical approach is to increase the level of clarity and precision in the meaning of the concepts used in a model (Shields, 1997). This is necessary, not only for the purpose of evaluating the model but also to make the model useful and to develop it (Wilson, 1969). Adopting the methodology of Wilson's analytical approach, Nørreklit (2000) analysed some of the key assumptions and relationships of the BSC. She sought to increase the clarity and precision in the concepts used in the BSC and, in addition, to suggest more valid concepts. The criticisms noted here thus challenge some key assumptions of the BSC. We decided to analyse BSC's limits with regard to these three key aspects providing to scholars and practitioners the basis for further research in order to overcome limits and therefore create a new performance management tool or improve the current use of the BSC.

Grady's (1991) study indicated that a company's strategic objectives should be broken down into critical success factors and critical actions. The discussion above shows us how previous studies added significantly to the richness of the debate regarding the BSC. As also discussed, several researchers have pointed out the limitations of the BSC concept and research in this field. This debate opens up some opportunities for future research, as outlined next (Hoque, 2014). In order to produce an elaborate overview of BSC's limits, a survey was conducted analysing the limits on the management experience also. To address our objective, we conducted an SLR of 99 papers published in high quality journals. We scanned selected articles reading all papers to ensure substantive context. Thus, we verified the articles' connection with our research topic. First, we analysed all 99 papers¹ in order to identify the limits connected to the same *Concept* of the BSC. To this end, we focused on all those theoretical aspects with regard to the same premises of the instrument (see concept). Second, in the same way, we analysed all 99 papers in order to identify the limits connected to the *Structure*, by focusing on the technical aspects such as the perspectives, the strategic map and implementation process. Third and last, we analysed all articles in order to identify the limits connected to the *Environment*, i.e. all those limits that hinder the success of the BSC for problems related to managers.

¹ Physically examining them to determine the extent to which they carried insights and experiences related to the BSC's limits.

Concept (theoretical aspects)

The limit was presented in 63 papers – the highest frequency distribution. Several authors talk about difficulties translating strategy into action using this tool, and about how BSC measures might not pick up the strategic linkages of a real BSC usage. Kaplan and Norton (2009) further assert that BSC measures need to be broken down into financial and non-financial measures in such a way that information, communication and strategy at all levels of organizations can be aligned for effective management. The strategy must be an integral part of the BSC and must be transmitted to all company levels. During the construction of the strategic map, it is necessary to consider both short-term and long-term vision goals. Goals should be communicated at all levels inside the organization. In other words, a focus on performance measurement instead of performance management will impede the realization of organizational objectives. It may even prove to have counterproductive effects by adversely affecting company performance. Thus, BSC investments will only pay off if they are strictly connected with strategy. Therefore, it is important to map how the BSC is used and how to evaluate whether BSC application facilitates and completes corporate strategy. So, a mechanistic use of the tool without a clear link to corporate strategy will hinder performance and may even decrease it. Butler, Letza, and Neale (1997) considered its concept to be too general, pointing out that it might not fit within an organization's culture and could ignore corporate missions. Clustering contained also the limits regarding the use of the tool. The tool assists only a few managers in the measurement of performance through several indicators and it misses focusing as a tool of performance management. (Braam, Nijssen 2004) The BSC is counterproductive and could be effectively used as a performance measurement to translate the company's objectives and the daily management's goals. Its use is associated with higher measurement system satisfaction, but not with improved accounting and stock market performance. In particular, it is not a tool adaptable for strategic control and the cause-effect relationship is not linear. It is up to the consultants of the BSC to take charge of a "systemic" verification of the strategic maps to avoid inducing undesirable behaviour in the organization. Nørreklit (2000, 2003) was highly critical of claims of causal relationships between the four perspectives of the BSC and of the validity of the system to serve as a strategic management tool. She argued that the BSC had problems with some of its key assumptions and relationships, and that there was not a causal but rather a logical relationship among the areas covered in the BSC. Further, Nørreklit (2000) noted that the BSC was not the valid strategic management tool that Kaplan and Norton (1996) claimed because it had difficulty ensuring organizational and socio-environmental rooting. Moreover, there is no conceptual framework for its implementation and it not guarantee an overall vision of the areas under investigation. The external validity of these approaches is often limited by their deeply idiosyncratic methodology and by the strong assumption of the causal relationship between the four dimensions of the BSC – and their related performance. **Appendix f** shows some of the most relevant limits connected to the *Concept*.

Structure (technical aspects)

In this cluster were included the limits regarding the structure of the tool in its implementation process. (**Appendix g**) First, BSC is considered a tool that is too expensive and this represents a considerable barrier for firms that want to implement it. Consequently, the implementation and construction of this strategic tool is difficult and represents a solution only for few large companies. Moreover, outputs are not clear and the number of indicators is too limited because of the difficulty to translate, in quantitative terms, the results obtained. The limits' greatest frequency in this cluster are: technical limit in the implementation, limit for the R&D sector, limit for the evaluation of the supply chain, limited evaluation of the performance and limited number of indicators. Therefore, there is some difficulty in understanding the most important criteria that are adaptable to evaluate the overall performance. This cluster also includes the limits connected to the target/objective, which were fixed in the construction of the strategic map. The goals are not clearly defined in the strategic map and are not shared with all corporate levels inside the organization. During the construction of the strategic map, it is necessary to consider both short-term and long-term vision goals. These should be communicated at all levels inside the organization. Furthermore, it is difficult to select, fix and then communicate the objectives to be achieved. In fact, the lack of a link between managers and goals has been defined during the construction of the BSC. It seems doubtful that the BSC can be used effectively to translate business goals into targets for daily management. It contains a too simplistic unidirectional causality mechanism, it neglects the notion of cause and effect relationships in time, and it presents a high level of vagueness in linking strategic and operational goals (Glykas, 2013). In particular, there are specific barriers to effective BSC implementation that have to be overcome: visions and strategies that are not actionable; strategies that are not linked to departmental, team, and individual goals; strategies that are not linked to long- and short-term resource allocation; and feedback that is tactical, not strategic. (Van Der Zee and De Jong, 1999) This limit was presented in 50 different papers.

Environmental

The last cluster includes all those limits that hinder the success of the BSC for problems related to the consideration of the qualitative analysis by the managers. It would seem that managers are too focused on the accounting dimension, so they place an excessive trust in the financial indicators. This leads to a waste of time and subjectivism. For these reasons, management is inadequate to define the measures for a strategic map. Furthermore, from the analysis of the papers, it appears that managers do not focus in a correct way on the tool in the long-term and they have trouble in understanding criteria that must be followed for the overall performance. Lipe and Salterio's study (2000) indicates that managers pay insufficient attention to leading and non-financial indicators, and this might limit the benefits they receive from BSC. Moreover, the cluster includes limits regarding the lack of integration and communication between different organizational levels. Without this integration between strategic level scorecards and the operational level, the BSC will fail. It will be inefficiently supported by leadership or sustained by employees.

In particular, these limits were presented in 38 papers. The cluster includes limits such as inadequacy of the managers to manage the tool, cognitive limits, conflict between strategic units and divisions, and so on. (**Appendix h**)

4.2 Discussion of the limits with Managers

The aim of this section is to link the literature to the practical point of view in order to identify the way to overcome the limits on the base of management experience. In particular, the objective is to identify method to control BSC's limits thanks to interviews conducted with 17 managers of large Italian companies (**Appendix i**). The managers was contacted thanks to the LinkedIn online platform and personal contacts. Four meeting were necessary, each required four hours discussion. They were scheduled as follows:

Day 1 - Discussion on the problematic related to the tool

Day 2 - Discussion on the limits identified by the literature

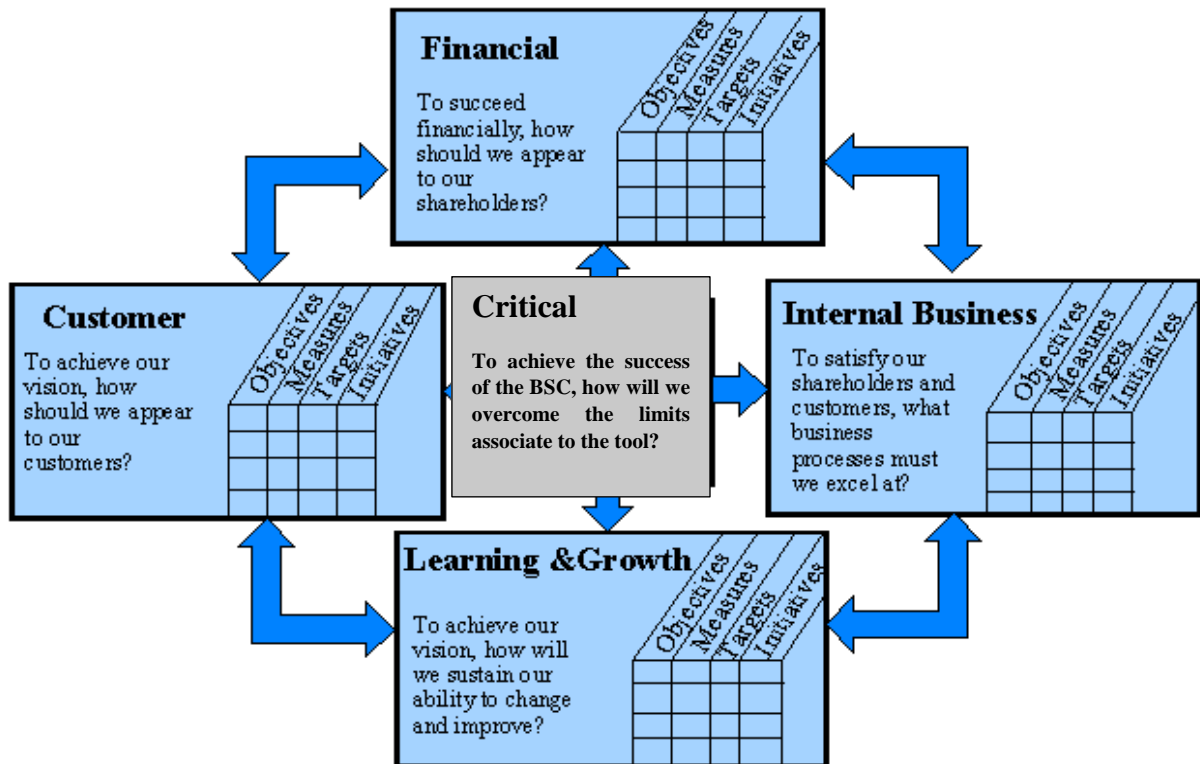
Day 3 - Discussion on how BSC's limits could be overcome

Day 4 - Creation of the Critical perspective of the BSC in order to manage its limits

7. CRITICAL PERSPECTIVE

On the base of the limits identified from both, literature and practices, we decided to improve the current use of the BSC, considering the limits in a new perspective called "*Critical Perspective*". This perspective should be an integral part of BSC in order to drive the BSC to the full success through monitoring critical factors and overcoming criticism connected to the tool. To this end, we summarized the most relevant limit per each key assumption analyzed in the previous discussion. In particular, to achieve the success of the BSC, how will we overcome the limits associate to the tool? For each key concern we identified the goal (control variable), that allow to prevent the occurrence of the limit and the deviation by the target given. (target represent the level to achieve in order to guarantee the success for the company and depends on the characteristic of company) For each goal, we inserted the key performance indicator (KPI) for evaluating the performance goal ratio, and we considered the method to measure the KPI. For each goal, it is suitable to take into account the target representing the range of satisfaction value. In this way, we will contain BSC' limits and therefore this will allow success of BSC.

Balanced Scorecard Framework*



* Adapted from Kaplan & Norton 1996. *The Balanced Scorecard*. Harvard Business School Press: 9. Original from HBR Jan/Feb 1996, p. 76.

Concept

For the first limit identified, the major criticism is essentially related to the lack of integration and communication between different organizational levels and the need to define performing goals. In order to overcome this limit, according to managers, we defined three different goals to insert in the critical perspective: *to increase integration between levels, to define performing goals and to evaluate daily management's goals*.

For the first one, the number of meeting per month will represent the KPI. The target in order to achieve a good level of integration is at least one meeting per week between all representative members of each business unit inside the organization and one meeting per week between each manager and all members of his business unit. The number of meeting can change according to the need and the kind of the company. The second goal is the need to define performing goals. To this end, the KPI aims to identify the number of goals that have led to creation value for the company, or indirectly have contribute to the value creation of the company (number performing goals/number total goals defined). For the *conceptual limit*, the last goal focus on the need to evaluate daily management's goals. The KPI chosen is the goal achievement rate, which represent the number of daily management's goals achieved. This allow managers to monitorate management activity and cohesion with the BSC.

Structure

The major criticism is related to the correct consideration of the short e long-term objectives and the need to clearly definition of goals in the strategic map. In order to overcome this kind of limit, we defined three different goals to insert in the critical perspective: *clearly definition of goals in the strategic map, to share with all corporate levels inside the organization and to consider both short-term and long-term objectives*.

In order to evaluate the clarity of the objectives defined, the KPI is the comprehension objectives rate that represent the percentage of comprehension by the staff on the total objectives defined. An important role is represented by the questionnaires send to the staff in order to obtain the information to analyze. (every week) The second goal aims to share strategic objectives with all corporate levels throughout the organization. The KPI is the percentage knowledge of the strategic objectives by each corporate unit. This objective is strictly correlate with the integration

between levels. (see above-concept) In this case, the focus is on the structure of the objectives. Questionnaires could help managers to understand the level of knowledge between the units inside the company. The need to consider both short-term and long-term objectives is the last aspect to consider. To this end, the KPI is the percentage of long-term objectives defined over the total objectives. In particular, it is necessary to have a balance between short and long-term vision.

Environment

The major criticism involve the relationship between managers and qualitative analysis. We identified three main goals to consider in the critical perspective: *increasing the use of qualitative indicators, selecting of qualitative indicators and monitoring performance of the indicators chosen*. We strongly believe that, this is one of the critical aspect needs to be improve in the future to increase the performance of the BSC. For the first goal, the KPI is the qualitative indicator’ use ratio that represent the percentage of qualitative indicators used over the total indicators. A good balance between qualitative and non-qualitative indicators is preferred to reach high quality level of analysis. The second goal is one of the most problematic aspects for the difficulties to find the adequate indicators, which are positive, and correlate to the value of the company. A statistical correlation between qualitative indicators and Enterprise Value (EV) could allow us to identify the most relevant indicators to use. The last goal is the need to evaluate the performance of the indicators, monitoring the trend after the introduction of the BSC. (for both, qualitative and non-qualitative)

Table 9 – Critical Perspective

KIND OF LIMITS	OBJECTIVES	KPI	MEASUREMENT	TARGET
<i>conceptual</i>	to evaluate integration between levels	n. of meeting per month	report by managers	
	to define performing goals	value creation	EVtx-Evtx-1	
	to define daily management’s goals	achieved daily goals ratio	n of daily goals achieved/n of tot daily goals	
<i>structural</i>	clearly definition of goals in the strategic map	% comprehension by the staff	questionnaire	
	to share with the whole organization through all corporate levels	% knowledge of the strategic objectives by each corporate unit	questionnaire	
	to consider both short-term and long-term vision	% long term objectives on total objectives	n. long term objectives/total objectives	
<i>environmental</i>	to increase the use of qualitative indicators	qualitative indicator rate of use	qualitative indicators/total indicators	
	to select most appropriate indicators	efficiency % of qualitative indicators chosen	indicators with positive correlation to the performance/total indicators chosen	
	monitoring performance of qualitative indicators	growth rate indicator	time series	

8. CONCLUSION AND IMPLICATION FOR RESEARCH AND PRACTICE

The aim of this article was to explore the status of research on the BSC’s limits with a view for identifying gaps and to sketch ideas for future research. According to our findings, it is evident how the limits identified, under three different perspectives might lead to the tool’s failure. Shields (1997) suggest, “future research should be informed by what has been learned from past research.” Although the studies examined here provide useful insights into BSC practices, some empirical, theoretical and methodological issues remain unsolved. In this section, we highlight some gaps in the knowledge base surrounding the BSC, with recommendations for further research.

According to the literature, the simple consideration of problems related to these key aspects represents the cause that does not allow the full effectiveness of the tool. In particular, the BSC can be employed effectively, but it needs to be integrated and improved with some aspects concerning the *Concept, Structure and Environment*. Thanks to managers, we created a new model to apply to companies in order to reach maximum benefit using BSC. In particular, the creation of the *Critical Perspective* allow us to consider the limitations identified and therefore to monitor the performance of the BSC. *Critical Perspective* provides managers a way to overcome the limits and to contribute to the success of the tool. In particular, the perspective is not a straightjacket for managers, but a base that need to be developed on the base of a specific companies’ characteristic. The selection of the KPI depends on the kind and aims of the company. Future research could identify other variables to insert in the

perspective considering various scenarios and different context of a specific BSC. One of the most important aspect is the qualitative analysis. Future research needs to consider more deeply qualitative analysis, to identify the role of the qualitative indicators for the going concern, and the most suitable set of indicators to use which are correlate to the value of the company.

We strongly believe that BSC should be employed but it needs to be integrated and improvements made to key aspects such as *Concept, Structure, Environment* discussed above. In particular, *Critical Perspective* will drive Managers to develop BSC's use through monitoring critical factors and overcoming criticism connected to the tool.

Moreover, cases of BSC's failure should be analyzed, considering the *Critical Perspective*.

Future research might explore more deeply the process of PMS design in the BSC, especially with respect to its relevance for managerial decision-making. It will be appropriate to analyse the critical factors concerning PMS (Ferreira and Otley, 2009) and to consider putting them into the model provided by the cited authors. Researchers will continue to explore various issues around the BSC using a range of theoretical frameworks.

Finally, the research design of this study, as previously represented, may constitute a further opportunity to advance the obtained results. Eventually, the relationships between topics reported in the model might be subject to large-scale generalizations both in the context of the BSC and for broader implications in the field of performance management systems.

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Appendix a – Frequency distribution of articles published on the BSC by journals

Accounting	1992 - 1996	1997 - 2001	2002 - 2006	2007 - 2011	2012 - 2016	Tot.	Tot. %
The Accounting Review	0	1	0	1	0	2	2.0
Accounting Organizations & Society	0	0	3	3	0	6	6.1
Journal of Accounting Research	0	0	0	2	1	3	3.0
Contemporary Accounting Research	0	0	0	0	1	1	1.0
ABACUS	0	0	0	2	0	2	2.0
Accounting and Business Research	0	0	0	2	0	2	2.0
Accounting Auditing & Account Journal	0	0	3	1	0	4	4.0
Behavioral Research in Accounting	0	0	3	2	1	6	6.1
The British Accounting Review	0	0	1	1	1	3	3.0
Critical Perspectives on Accounting	0	0	4	2	1	7	7.1
European Accounting Review	0	0	0	2	1	3	3.0
Financial Accountability & Management	0	0	2	1	0	3	3.0
Management Accounting Research	0	3	3	3	1	10	10.1
Tot	0	4	19	22	7	52	53.0
General Management							
International Journal of Management Review	0	0	0	1	0	1	1.0
Journal of Business Research	0	0	0	0	1	1	1.0
Journal of Management Studies	0	1	0	0	0	1	1.0
Tot	0	1	0	1	1	3	3.0
Finance							
European Financial Management	0	1	0	0	0	1	1.0
Tot	0	1	0	0	0	1	1.0
Information Management							
Journal of Management Information Systems	0	1	0	0	0	1	1.0
Expert System with Applications	0	0	0	2	1	3	3.0
Tot	0	1	0	2	1	4	4.0
International Business and Area Studies							
Asia-Pacific Journal of Management Research and Innovation	0	0	0	0	1	1	1.0
Tot	0	0	0	0	1	1	1.0
Operations Research and Management Science							
European Journal of Operational Research	0	0	1	2	4	7	7.1
Annual Operational Research	0	0	0	0	1	1	1.0

Journal of Optimizational Theory and Applications	0	0	0	0	1	1	1.0
The Journal of the Operational Research Society	0	1	2	2	0	5	5.1
Omega	0	0	0	0	2	2	2.0
Tot	0	1	3	4	8	16	16.0
Organization Studies							
Organization	0	0	1	0	0	1	1.0
Tot	0	0	1	0	0	1	1.0
Psychology (Organizational)							
Ergonomics	0	0	0	1	0	1	1.0
Journal of Managerial Psychology	0	0	1	0	0	1	1.0
Tot	0	0	1	1	0	2	2.0
Public Sector and Health Care							
Public Administration	0	0	1	0	0	1	1.0
Public Management Review	0	0	0	0	1	1	1.0
Tot	0	0	1	0	1	2	2.0
Regional Studies, Planning and Environment							
Business Strategy and the environment	0	0	2	2	0	4	4.0
Journal of Environmental Management	0	0	0	1	0	1	1.0
Tot	0	0	2	3	0	5	5.0
Sector Studies							
Journal of Travel Research	0	0	1	0	0	1	1.0
Tourism Management	0	0	0	1	0	1	1.0
International Journal of Contemporary Hospitality Management	0	0	1	2	2	5	5.1
Tot	0	0	2	3	2	7	7.0
Strategy							
Long Range Planning	0	0	4	1	0	5	5.1
Tot	0	0	4	1	0	5	5.0
Totall	0	8	33	37	21	99	100

Appendix b – synonyms for limit

- weakness
- failure
- deficiency
- failing
- flaw
- fragility
- frailty
- gap
- instability
- lack
- lapse
- shortcoming

Appendix c – Academic Journal Guide (ABS)

	Distribution of journals across ratings				
	4	3	2	1	Total
Accounting	6	21	30	23	80
Business History and Economic History	2	5	12	7	26
Economics, Econometrics and Statistics	23	68	120	108	319
Entrepreneurship and Small Business Management	3	5	5	7	20
Finance	8	29	38	30	105
General Management, Ethics and Social Responsibility	7	10	12	15	44
Human Resource Management and Employment Studies	5	10	17	16	48
International Business and Area Studies	2	7	14	17	40
Information Management	4	17	31	27	79
Innovation	2	2	14	11	29
Management Development and Education	1	3	16	23	43
Marketing	8	12	21	25	66
Operations and Technology Management	3	9	11	36	59
Operations Research and Management Science	5	22	16	22	65
Organisation Studies	5	4	13	7	29
Psychology (Organisational)	7	13	19	30	69
Psychology (General)	7	13	11	24	55
Public Sector and Health Care	3	10	11	9	33
Regional Studies, Planning and Environment	2	12	8	2	24
Sector Studies	5	10	34	44	93
Social Sciences	9	27	23	3	62
Strategy	1	3	5	4	13
All Subject Areas	118	312	481	490	1401

Appendix d – Accounting

4									
JOURNAL	PAPER SEL								
	"BALANCED SCORECARD"		"BSC"		"PERFORMANCE MANAGEMENT"		"PERFORMANCE MEASUREMENT"		TOT
		%		%		%		%	
ACCOUNTING REVIEW	8	100	0	0	0	0	0	0	8
ACCOUNTING, ORGANIZATIONS AND SOCIETY	10	100	0	0	0	0	0	0	10
JOURNAL OF ACCOUNTING AND ECONOMICS	0	0	0	0	0	0	0	0	0
JOURNAL OF ACCOUNTING RESEARCH	3	100	0	0	0	0	0	0	3
CONTEMPORARY ACCOUNTING RESEARCH	1	100	0	0	0	0	0	0	1
REVIEW OF ACCOUNTING STUDIES	0	0	0	0	0	0	0	0	0
TOT FASCIA 4	22	100	0	0	0	0	0	0	22
ACCOUNTING FASCIA 3									
ABACUS	2	100	0	0	0	0	0	0	2
ACCOUNTING AND BUSINESS RESEARCH	2	100	0	0	0	0	0	0	2
ACCOUNTING FORUM	0	0	0	0	0	0	0	0	0
ACCOUNTING HORIZONS	2	100	0	0	0	0	0	0	2
ACCOUNTING, AUDITING AND ACCOUNTABIL	6	100	0	0	0	0	0	0	6
AUDITING: A JOURNAL OF PRACTICE AND THEORY	0	0	0	0	0	0	0	0	0
BEHAVIORAL RESEARCH IN ACCOUNTING	7	100	0	0	0	0	0	0	7
BRITISH ACCOUNTING REVIEW	5	83,33333	0	0	0	0	1	16,6666667	6
BRITISH TAX REVIEW	0	0	0	0	0	0	0	0	0
CRITICAL PERSPECTIVES ON ACCOUNTING	9	100	0	0	0	0	0	0	9
EUROPEAN ACCOUNTING REVIEW	7	100	0	0	0	0	0	0	7
FINANCIAL ACCOUNTABILITY AND MANAGEMENT	8	100	0	0	0	0	0	0	8
FOUNDATIONS AND TRENDS IN ACCOUNTING	0	0	0	0	0	0	0	0	0
INTERNATIONAL JOURNAL OF ACCOUNTING	0	0	0	0	0	0	0	0	0
JOURNAL OF ACCOUNTING AND PUBLIC POLICY	1	100	0	0	0	0	0	0	1
JOURNAL OF ACCOUNTING LITERATURE	0	0	0	0	0	0	0	0	0
JOURNAL OF ACCOUNTING, AUDITING AND FINANCE	1	100	0	0	0	0	0	0	1
JOURNAL OF BUSINESS FINANCE AND ACCOUNTING	0	0	0	0	0	0	0	0	0
JOURNAL OF INTERNATIONAL ACCOUNTING	0	0	0	0	0	0	0	0	0
AUDITING AND TAXATION	0	0	0	0	0	0	0	0	0
JOURNAL OF THE AMERICAN TAXATION ASSOCIATION	0	0	0	0	0	0	0	0	0
MANAGEMENT ACCOUNTING RESEARCH	23	95,83333	1	4,16666667	0	0	0	0	24
TOT FASCIA 3	73	97,33333	1	1,333333333	0	0	1	1,333333333	75
TOT AREA	95	97,93814	1	1,030927835	0	0	1	1,030927835	97

Appendix e – Papers selected in Accounting

JOURNAL	Papers selected	% of the tot (area)
THE ACCOUNTING REVIEW	2	3%
ACCOUNTING, ORGANIZATION AND SOCIETY	6	12%
JOURNAL OF ACCOUNTING RESEARCH	3	6%
CONTEMPORARY ACCOUNTING RESEARCH	1	2%
ABACUS	2	4%
ACCOUNTING AND BUSINESS RESEARCH	2	4%
ACCOUNTING AUDITING AND ACCOUNTABILITY JOURNAL	4	7%
BEHAVIORAL RESEARCH IN ACCOUNTING	6	12%
BRITISH ACCOUNTING REVIEW	3	6%
CRITICAL PERSPECTIVE ON ACCOUNTING	7	14%
EUROPEAN ACCOUNTING REVIEW	3	6%
FINANCIAL ACCOUNTING AND MANAGEMENT	3	6%
MANAGEMENT ACCOUNTING RESEARCH	10	18%
TOTAL	52	100

Appendix f - limits connected to the Concept of the tool

Area	Journal	Year	Author	Key findings
INFORMATION MANAGEMENT	JOURNAL OF MANAGEMENT INFORMATION SYSTEM	1999	VAN DER ZEE, DE JONG	<i>Four specific barriers to effective BSC implementation that have to be overcome are identified: visions and strategies that are not actionable; strategies that are not linked to departmental, team, and individual goals; strategies that are not linked to long- and short-term resource allocation; feedback that is tactical, not strategic.</i>
ACCOUNTING	THE ACCOUNTING REVIEW	2000	LIPE, SALTERIO	<i>The BSC may limit managers' ability to fully exploit the information found in a diverse set of performance measures.</i>
HR MANAGEMENT AND EMPLOYMENT STUDIES	EUROPEAN FINANCIAL MANAGEMENT	2001	JENSEN	<i>As a PMS the BSC is highly counterproductive; it will generally lead to confusion, conflict, inefficiency and lack of focus.</i>
ACCOUNTING	CRITICAL PERSPECTIVE ON ACCOUNTING	2005	BESSIRE, BAKER	<i>The BSC is essentially based on an inadequate consideration of the different dimensions of organizational reality.</i>
ACCOUNTING	ACCOUNTING, ORGANIZATION AND SOCIETY	2005	CHENHALL	<i>Concerning the extent to which BSC helped clarify strategy, Ittner and Larcker (2001) found that scorecards assisted only a minority of managers in understanding goals and strategies or in relating their jobs to business objectives.</i>
ACCOUNTING	MANAGEMENT ACCOUNTING RESEARCH	2010	KRAUS, LIND	<i>BSCs ignore time and hence lags between cause and effect; and empirical evidence fails to support relationships put forward, e.g. some loyal customers are unprofitable as they place small orders at favourable prices, thus customer satisfaction does not necessarily yield good financial results. Also causal linkages between non-financial performance drivers and financial outcome measures were often neither specified nor well understood.</i>
ACCOUNTING	BRITISH ACCOUNTING REVIEW	2014	HOQUE	<i>The BSC measures might not pick up the strategic linkages of real BSC usage; it does not pick up firms' tendency to use quantitative measures (frequency and extent of reporting) of several kinds in assessing performance.</i>

Source: elaboration on the data set

Appendix g - The limits connected to the Structure

Area	Journal	Year	Author	Key findings
GENERAL MANAGEMENT	JOURNAL OF MANAGEMENT STUDIES	2001	WITCHER, BUTTERWORTH	<i>The BSC is criticized for being rigid because the four linked perspectives and the indicators within them are relatively limiting. The potential risk is that non-profit leaders and managers may be misled by focusing only on the four perspectives in the BSC and may end up missing other equally important factors in their organizations.</i>
ACCOUNTING	CRITICAL PERSPECTIVE ON ACCOUNTING	2003	LAITINEN	<i>The limitation of BSC to the four perspectives has been regarded as too narrow. The four perspectives should be considered as a template, not a straightjacket, for the ability of BSC to serve as a tool for strategic control. Second, the model is considered too general.</i>
ACCOUNTING	JOURNAL OF ACCOUNTING RESEARCH	2011	DING, BEAULIEU	<i>Limitations include the common-measure bias, the grouping effect, the over-reliance on financial measures, and the conditional use of strategy-linked measures. This stream of research indicates that effects of the BSC's complex design on individuals' cognitive effort should be considered, especially in the performance evaluation context.</i>
GENERAL MANAGEMENT	JOURNAL OF BUSINESS RESEARCH	2012	BENTES, CARNEIRO, DA SILVA, KIMURA	<i>It seems doubtful that the BSC can be used effectively to translate business goals into targets for daily management.</i>
ACCOUNTING	CONTEMPORARY ACCOUNTING RESEARCH	2015	BUSCO, QUATTRONE	<i>The four BSC perspectives (Internal Business Processes, Learning & Growth, Customer Satisfaction, and Financial), affect managers' cognitive abilities when using large numbers of KPIs in assessing performance.</i>

Source: our elaboration on the data set

Appendix h - The limits connected to the Environment

Area	Journal	Year	Author	Key findings
ACCOUNTING	THE ACCOUNTING REVIEW	2000	LIPE, SALTERIO	<i>The BSC may limit managers' ability to fully exploit the information found in a diverse set of performance measures.</i>
GENERAL MANAGEMENT	JOURNAL OF MANAGEMENT STUDIES	2001	WITCHER, BUTTERWORTH	<i>The BSC is criticized for being rigid because the four linked perspectives and the indicators within them are relatively limiting. The potential risk is that non-profit leaders and managers may be misled by focusing only on the four perspectives in the BSC and may end up missing other equally important factors in their organizations.</i>
ACCOUNTING	ACCOUNTING, ORGANIZATION AND SOCIETY	2007	WONG-ON-WING, GUO, LI, YANG	<i>The evidence from these studies indicates that although information about strategy effectiveness is available in the BSC, it is not used as much as would have been expected, presumably because of cognitive limitations. The tendency to overlook the validity of the causal links between driver and outcome measures of the BSC is a potential source of conflict between top management and divisional managers.</i>
ACCOUNTING	CONTEMPORARY ACCOUNTING RESEARCH	2015	BUSCO, QUATTRONE	<i>The four BSC perspectives (Internal Business Processes, Learning & Growth, Customer Satisfaction, and Financial), affect managers' cognitive abilities when using large numbers of KPIs in assessing performance.</i>
ACCOUNTING	JOURNAL OF ACCOUNTING RESEARCH	2016	CHEN, JERMIAS, PANGGABEAN	<i>Previous BSC studies have focused on the underlying stimulus drawing attention. They assumed that managers' attention is linked exclusively to the format of the stimulus. This line of research is primarily concerned with how the BSC should be designed or formatted to draw attention (e.g., by using a strategy map), to a causal chain, and different formats. The main objective of this line of research is to improve the future design of the BSC.</i>

Source: our elaboration on the data set

Appendix i – managers interviewed

	Position	experience (BSC)	size of company	sector
1	senior manager	>3 years	big	industrial
2	senior manager	>3 years	big	industrial
3	senior manager	>3 years	big	industrial
4	senior manager	>3 years	big	industrial
5	senior manager	>3 years	big	financial
6	senior manager	>3 years	small	services
7	senior manager	>3 years	small	services
8	senior manager	>3 years	small	services
9	senior manager	<i><3 years</i>	big	services
10	senior manager	<i><3 years</i>	big	financial
11	senior manager	<i><3 years</i>	big	financial
12	middle manager	>3 years	big	services
13	middle manager	>3 years	big	services
14	middle manager	>3 years	big	industrial
15	lower manager	>3 years	big	industrial
16	lower manager	<i><3 years</i>	big	industrial
17	lower manager	<i><3 years</i>	small	industrial

THE CONCEPT, TYPES AND FEATURES OF THE LEGAL STATUS OF AGRICULTURAL COOPERATIVES IN KAZAKHSTAN: PROBLEMS AND PROSPECTS

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ABSTRACT

This article examines theoretical and practical aspects of the legal status of agricultural cooperative in Kazakhstan. The object of this study is social relations in the field of agricultural cooperation. The subject of this study is a legal mechanism of regulation of the relationship under consideration, in particular the laws of the Republic of Kazakhstan, decrees of the Government of the Republic of Kazakhstan, departmental regulatory legal acts and regulatory documents, legislation in the field of civil, land, agricultural, environmental and other legislation regarding agricultural cooperation in Republic of Kazakhstan. The purpose of the study is to analyze and critically interpret current legislation related to the regulation of relations in the field of agricultural cooperation; the study of doctrinal developments of scientists in this field, identification of the most important theoretical problems and development on this basis of proposals for the improvement of legislation and law enforcement practice.

Keywords: agrarian legislation, agricultural cooperative, agrarian legal relations, land law, environmental law, state mechanism, subject of law.

INTRODUCTION

An agricultural cooperative is one of the most widely used forms of doing business in agriculture in the world. When defining perspective forms of cooperative management, it is useful to comprehensively study world experience. The world experience of agricultural cooperatives is extensive and is of great interest for the study and use by farmers of our republic. Foreign experience suggests that cooperatives operate in almost all major sectors of agriculture. Our own experience and world practice is widely used in the creation of cooperatives. This does not deny, but presupposes the participation of republican and regional AIC management bodies in the development of cooperation and integration. And it should be noted that agricultural cooperatives in the agrarian sphere can and should be developed and occupy a corresponding niche in the country's economy along with other effectively functioning agro-industrial formations.

In the Republic of Kazakhstan there are no scientific studies of the legal problems of agricultural cooperation in the context of new Entrepreneurial Code of the Republic of Kazakhstan and the Law of the Republic of Kazakhstan "On Agricultural Cooperation". There is no fully scientifically based methodological approach in a special literature. In the theory and practice of the development of macroeconomic relations, various forms of state influence on entrepreneurial activity are distinguished: fiscal, monetary, legal, and others. At the same time, in the modern conditions of globalization of the economy, it is necessary to develop an effective strategy for using these forms in enhancing entrepreneurship.

The above shows that the problems of agrarian transformations require close attention from the legal science, which should theoretically comprehend the role of the state and law in the process of forming a conceptually new model of agrarian policy, and propose legal tools for its effective implementation in the present conditions. The current stage in the development of society requires a rethinking of many tenets of socialist theory and practice in the field of agricultural cooperation and the justification of new priorities, a review of conceptual provisions.

The development of cooperation in the agrarian sector of Kazakhstan requires today new approaches in the implementation of the State program of the agro-industrial complex until 2020. The Republic of Kazakhstan has created an extensive legal framework for the development of cooperation.

October 29, 2015, Kazakhstan adopted the Entrepreneurial Code aimed at improving and developing legislation in the sphere of interaction between business entities and the state, supporting entrepreneurship, eliminating gaps and contradictions in the legal regulation of business relations **(Entrepreneurial Code, 2018)**.

LITERATURE REVIEW

Agricultural cooperatives as an object of legal research are a complex category, the research of which was carried out from different positions. Economic aspects of agricultural cooperatives were studied in the works of the following agricultural economists: Dyadichko E.V., Buzdalov I.N., Krylatykh E.N., Koryakov I.L., Lishansky M.L., Maslova I.B., Serova E. V., Khitskov A.I., Filippova G.L., Shmelev G.I., and Yanbykh R. Legal research in the field of agricultural credit cooperation was conducted by Zakirova V. R. and Tryakhova E. P. Additionally, this problem is actively investigated in the works of such foreign legal scholars as Bystrov G.E., Kozyr M.I., Hoyt A., Groves F., Ingalsbe G., Kerimova S., and others, domestic scientists - lawyers Erkinbaeva L.K., Klimkin S.I., Aigarinova G.T., Dzhangabulova A. K., Amirkhanova G., and others. The contribution of these scientists is the theoretical basis for further research in the development of state-legal regulation of the activities of agricultural cooperatives. However, not all aspects of the problem have been fully studied; a number of issues are debatable and require in-depth theoretical research and reflection.

METHODOLOGY

The research methodology consists of formal-logical, historical-legal, system-analytical, comparative-legal and concrete-sociological and other research methods.

DISCUSSION

Discussion. In the current legislation of Kazakhstan, in the Civil Code, the Law on Agricultural Cooperatives, an agricultural cooperative is recognized as a legal entity in the organizational and legal form of a production cooperative created on the basis of membership by voluntary association of individuals and (or) legal entities for joint production and (or) other economic activities in order to meet their socio-economic needs in the production, processing, marketing, storage of agricultural household products, aquaculture products (fish farming), the supply of the means of production and material and technical resources, lending, water supply or other services for members of the cooperative, as well as associate members of the cooperative. They are legal entities with general legal capacity arising after their state registration, and act on the basis of the statutes adopted by the founders at meetings in accordance with the norms of general civil and cooperative legislation. The purpose of an agricultural cooperative is joint activities for the production, processing and marketing of agricultural products and the implementation of other activities not prohibited by law. Civil Code of the Republic of Kazakhstan (general part) Art. 226 makes it possible to create production cooperatives on the basis of a peasant farm: “members of a peasant or farm can establish a business partnership or production cooperative on the basis of the property of the farm. Such a reorganized peasant or farm as a legal entity has ownership of property transferred to it in the form of contributions and other contributions by members of the farm, as well as property obtained as a result of its activities and acquired for other reasons not contrary to the law.” **(Civil code of the Republic of Kazakhstan. General part)**

The main problem of the effective development of the agro-industrial complex of the Republic of Kazakhstan lies in the small-scale nature of production, accompanied by a high proportion of small farms in the total gross agricultural output, the total number of agricultural formations, and the tendency to reduce their land plots.

It should be noted that according to the legislation on entrepreneurial activity, its implementation, including the conduct of agricultural production, is possible without the creation of a legal entity. In this case, the citizen leading such activities, i.e. acting in the role of commodity producer, has the legal status of an individual entrepreneur and the corresponding rights and obligations of the participant in commodity-money and legal relations forming them.

All agricultural commercial organizations and enterprises are holders of complex legal personality, that is, they can be participants in administrative, civil, labor, cooperative, land and other legal relations. The range of such legal relations with the participation of agricultural commercial organizations (enterprises) is very wide and varied. It is determined for each particular enterprise primarily by the nature of its industrial and commercial activities, industry specialization.

The subject of law is one of the most important categories of legal science and practice. Without subjects there is no legal relationship. In our opinion, the subjects of agrarian legal relations can be, first of all, individuals and legal entities engaged in agricultural activities.

According to G.E. Bystrov “the key to determining the circle of participants in agrarian relations is the concept of agricultural activity”. (Bystrova, 2000). The current legislation focuses on the implementation of commercial agricultural production. What signs are inherent in commodity agricultural production and what it is. The current legislation, including the law “On state regulation of the agro-industrial complex and development of rural territories” does not give an answer, which in practice leads to discrepancies and misinterpretation of legislative requirements (The Law About state regulation of development of agro-industrial complex and rural territories., 2005)

Unlike our country, Russia took the path of adopting a special law “On the Development of Agriculture” dated December 27, 2006, which regulates relations arising between citizens and legal entities recognized by agricultural producers, other citizens, legal entities, government bodies in agricultural development (On the development of agriculture (as amended on July 29, 2018), 2018)

According to the document under consideration, agricultural production recognizes a set of economic activities for growing, producing and processing, respectively, agricultural products, raw materials and food, including the provision of relevant services. The above definition shows that the position of the Russian legislator is a fairly broad understanding of this concept.

In our opinion, agricultural production is an activity that is inseparably linked with the use of agricultural land for the purpose of producing agricultural products for own and other needs. It should be noted that earlier in the conditions of the socialist form of economic management there was a Classifier of branches of the national economy and agricultural and industrial products. It was convenient because it could be clearly defined to which type of activity, product, one or another activity or product could be attributed, and therefore the creation of such an instrument in the conditions of market relations is also necessary. For example, mushrooms that grow in the forest or on agricultural fields are agricultural products or not, and if they are specially grown for the purpose of sale? Therefore, the need to create such a document in the form of a catalog or classifier has arisen. Moreover, such analogues already exist, for example, by the order of the Department of Food Resources of the Government of Moscow dated 04.10.04 01-P-291/4, the Classifier of agricultural products, raw materials and food was introduced. It says that this document was created in order to unify information of the enterprises of the wholesale food complex on the distribution of agricultural products, raw materials and food, linking indicators with the All-Russian Product Classifier and systematize the collection of data on availability, supply, prices and sales of food products in the city.

Such features as, firstly, the use of land as the main means of production, and secondly, the focus on the production of agricultural products (plant growing, animal husbandry, beekeeping) are inherent in agricultural production.

In order to determine whether this is a commodity activity or not, it is necessary, in our opinion, to work out a number of criteria on the basis of which it is possible to determine the presence of commodity production. These include the following:

- Purpose and types of agricultural production. It should be carried out with a view to profit. As for the types of production, for example, in the personal subsidiary (household) such products are created in order to meet their own needs.

- The size of the land used for agricultural production. This criterion is of great importance. For example, the Land Code provides that for the management of personal subsidiary households, Kazakhstan citizens can be provided with free of charge 0.25 hectares on non-irrigated and 0.15 hectares on irrigated lands, and the limits are set by local representative (The land Code, 2003).

For peasant (farmer) farms and legal entities leading commercial agricultural production, the maximum (maximum) norms of land plots, which may be in private ownership or land use, and the minimum ones are not established. (Kazakhstan, 2003)

In practice, the fact of the creation of a farm or a legal entity already gives grounds to state the existence of commodity production. Establishing the size of a land plot from which it is possible to judge the management of commodity production is important now, in conditions when many peasant farms are not officially registered with the real estate authorities.

- organizational and legal form of activity on the land plot. These include legal entities and individual entrepreneurs engaged in agricultural production for profit. In this regard, I would like to note that “the expansion of agrarian legislation beyond land relations in their narrow sense led to its inclusion in its orbit as a central legal institution in the field of agricultural regulation, the institute of an agricultural enterprise, therefore the problem of agricultural activity as a subject of legal regulation closely related to the problem of an agricultural enterprise, as an economic and legal category” (Amirkhanova, 2005). Determining the availability of commodity agricultural production is necessary in order to properly implement the norms of the current Land Code of the country, which requires that agricultural land be provided to private ownership or use of peasant farms and non-state legal entities of the RK for commercial agricultural production. (Article 24 , 97). This means that not for all types of agricultural activity, agricultural land can be made privately owned. For example, if an economic entity deals only with the processing or sale of agricultural products, it cannot be the owner of agricultural land, because in its activities the

land does not play the role of the main means of production, it plays the role of a spatial basis. Therefore, many studies use the term “primary processing”, “sales of own production”, which indicates that agricultural activity in the agrarian and legal aspect takes place when it comes to the close connection of the production process, and only then its subsequent stages, that is, the processing and sale of agricultural products.

The Russian legislator is more consistent in this area. As an agricultural producer, the law recognizes the organization of an individual entrepreneur engaged in the production of agricultural products, their primary and subsequent (industrial) processing (including leased assets) in accordance with the list approved by the Government of the Russian Federation. The sale of these products is subject the total income of agricultural producers' share from the sale of these products is not less than seventy percent in a calendar year. This provision allows to judge about the presence of the fact of commodity production. It takes place in the presence of 70% of the sold agricultural products of own production or processing during the calendar year. The formulation “subsequent industrial” processing is not entirely clear. In our opinion, this type of economic activity is not directly related to the use of land as the main means of production, therefore the inclusion of private ownership of agricultural land in the subjects is undesirable.

The progressive provisions of this law, in our opinion, should be adopted and implemented in national legislation.

According to the current land legislation of the Republic of Kazakhstan, both state and non-state legal entities can act as subjects of rights to agricultural land plots. Thus, the subject of the law of permanent land use, according to Art. 34 of the Land Code of the Republic of Kazakhstan may be state land users engaged in agricultural production, as well as research, experimental and educational activities. As for non-state structures, the land legislation does not specify the particularities of the legal regime of land plots of such entities, only stipulating that they can act as actors, both the rights of temporary land use and the rights of private ownership of agricultural land.

According to Amirkhanova I.V. “The legal framework for agricultural entrepreneurship of individuals and legal entities is significantly different due to the specifics of determining the land regime as the main means of production used for this activity.

The identification of types of entrepreneurial activity is possible according to several criteria, namely: the criterion of the fundamental principle of entrepreneurial activity — the form of property on which it is carried out; according to the criterion for determining a business entity and its organizational and legal forms.

The main specific division of entrepreneurship, depending on the form of ownership in accordance with the current legislation is into private and state entrepreneurship. And legal forms of entrepreneurship can be distinguished, first of all, by legal subjects of entrepreneurial activity which is the entrepreneurship of individuals and legal entities.

Legal support of agricultural entrepreneurship of individuals and legal entities has significant differences in connection with the specifics of determining the mode of land as the main means of production used for this activity. These differences are manifested in the formation of agrarian business entities, at the initial stage of providing the opportunity for the state to use land for business, throughout the entire period of the activity itself. There should be created a separate niche for agricultural entrepreneurship in the legislative design

Among all agricultural producers a certain percentage of the production of agricultural products accounted for agricultural organizations.

In the current legislation of the Republic of Kazakhstan there is no well-established definition of the concept of agricultural organization. In our opinion, it is necessary to distinguish the concepts of "agricultural organization" and "agricultural commodity producer". They should not be equal in the meaning. Why? We will try to clarify our position.

Firstly, the agricultural organization has the status of a legal entity, whereas an agricultural producer may be an individual. Secondly, not every agricultural organization directly participates in the production and primary processing of agricultural products. For example, an agricultural partnership may be created with the aim of providing various services. Thirdly, the land is not always the main means of production of such an agricultural organization, which is engaged in the provision of various types of sales, supply and other services. Fourthly, the agricultural organization should be recognized as the organizational and legal form of agricultural entrepreneurship, since it is associated with agricultural activities, agricultural business, and its implementation involves making profit or solving some statutory tasks. To narrow the circle of subjects of agrarian business, recognizing only agricultural producers, as it was suggested by I.V. Amirkhanova, in our opinion, is wrong.

Currently, the state is interested in the development of various organizational and legal forms of agrarian entrepreneurship. Therefore, it creates economic conditions to stimulate the activities of both agricultural producers and other economic entities in the agricultural business, for example, the activities of a rural consumer cooperative, agricultural partnership.

In this regard, there is an urgent need for legislative differentiation of the above concepts, in order to determine their legal personality. Automatic recognition of all agricultural organizations by agricultural producers will lead to “squandering” of agricultural land, which is unacceptable luxury. Land legislation is in the position

that agricultural land is provided for agricultural production. Therefore, regulatory authorities should be armed with specific statutory regulations that allow to judge the existence of such production in order to exercise effective control over the use of agricultural land and the assessment of its quality. We focus not on all agricultural land; we are talking only about farmland.

The presence of these practical problems is explained by the fact that the current legislation does not contain a clear understanding of the agricultural organization. This question is not answered in the agrarian and in the land legislation, although many agricultural scientists recognize the existence of an independent legal institute “Organizational and legal forms of agricultural organizations”, which shows the content of all foreign and domestic textbooks on agrarian law. Moreover, there is a lack of comprehensive scientific research in agrarian and legal science in this area, which requires its solution.

In the Republic of Kazakhstan, the legal and economic foundations for the creation and activities of agricultural cooperatives and their unions constituting the system of agricultural cooperation are determined by the Law of the Republic of Kazakhstan from October 29, 2015 No. 372-V “On Agricultural Cooperation”. According to Art. 5 of the law, an agricultural cooperative is a legal entity in the organizational and legal form of a production cooperative created on the basis of membership by voluntary association of individuals and (or) legal entities to carry out joint production and (or) other economic activities in order to meet their socio-economic needs in production, processing, marketing, storage of agricultural products, aquaculture products (fish farming), the supply of the means of production and mate technical resources, crediting, water supply or other servicing of members of a cooperative, as well as associate members of a cooperative [(The Law on agricultural cooperatives, 2001)]. The main activities of agricultural cooperatives are the production, processing, marketing, storage of agricultural products, aquaculture products (fish farming), the supply of production facilities and material and technical resources and other types of services for members of the cooperative, as well as associated members. Thus, paragraph 5 of Art. 96 of the Civil Code of the Republic of Kazakhstan established that the legal status of an agricultural cooperative formed in the form of a production cooperative, as well as the legal status, rights and obligations of its members are determined by this Code and other Laws of the Republic of Kazakhstan, except as provided by the Law of the Republic of Kazakhstan "On Agricultural Cooperatives".

However, paragraph 2 of Art. 2-1 of the Law of the Republic of Kazakhstan dated October 5, 1995 “On Production Cooperative” (Republic of Kazakhstan. About production cooperative, 1995)], it is established that this Law does not apply to relations on regulation of the legal status of an agricultural cooperative formed in the form of a production cooperative, as well as the legal status, rights and obligations of its members, which are determined by the Law of the Republic of Kazakhstan “On Agricultural Cooperatives”. Thus, on the one hand, the legislation establishes that an agricultural cooperative is created and operates in the form of a production cooperative. On the other hand, it does not allow the application of the norms of the Law on Production Cooperatives to agricultural cooperatives. Even more confusion in this issue makes paragraph 4 of Art. 5 of the Law on Agricultural Cooperatives, according to which the company name of an agricultural cooperative must include its name with the words “agricultural production cooperative” or the abbreviation “APC”. Another problem is related to the introduction of the law on agricultural cooperatives. It has also been established that rural consumer cooperatives, rural consumer cooperatives of water users, agricultural partnerships are required to undergo a reorganization or liquidation procedure in accordance with the legislation of the Republic of Kazakhstan. If these requirements are not fulfilled after one year from the moment this Law enters into force, these cooperatives are subject to liquidation by a court decision. At the same time, the Law does not indicate in what form the reorganization should be made. Probably, the developers of this Law and the legislator have left this question to a consideration of the members (participants) and the heads of these legal entities, as well as the registration authorities.

However, it is obvious that in whatever form such reorganization is supposed, it cannot be carried out with the preservation or appearance (the last - during reorganization in the form of division, separation or merger) of legal entities of the mentioned organizational and legal forms. In other words, due to the repeal of the aforementioned Laws, rural consumer cooperatives, agricultural partnerships and rural consumer cooperatives of water users were excluded from the list of legal forms of legal entities. There remains a transformation, but into what form a legal entity? There are only two options: a “simple consumer cooperative” or an agricultural cooperative (but not a religious association, a political party, an autonomous educational organization, a cooperative of apartment owners or a notarial chamber). But both options are also flawed. The possibility of transforming into “just a consumer cooperative” does not contradict the law, but shows the imperfection of the system of non-profit organizations themselves. Unlike the list of commercial organizations closed by the Civil Code, the list of forms of non-profit organizations is "half-open" to other legislation (Art. 34 Civil Code). The Law from January 16, 2001 No. 142-II “On Non-Profit Organizations” also did not “close” it. (The Law About the non-profit organizations, 2001)

The possibility of transforming rural consumer cooperatives, rural consumer cooperatives of water users and agricultural partnerships into agricultural cooperatives is even more difficult issue. It would seem that the answer is “on the surface” since the laws on the specified forms of legal entities were put on cancellation in connection with the adoption of the Law on Agricultural Cooperatives, they should be transformed into a legal

entity of this legal form. S.I. Klimkin runs into the question of the very possibility of transforming non-commercial legal entities into commercial ones. Supporters of the idea of the possibility of such a transformation usually put forward the thesis: in civil law, in contrast to administrative and criminal law, the principle is "Everything is allowed that is not prohibited." Since it does not contain a direct ban on the transformation of a non-profit organization into commercial civil law, it means that such a transformation is possible. However, in his opinion, this approach to the fundamentals of legislative regulation of legal relations is detrimental [(Kerimov, 2017) After all, in addition to the method of direct prohibition (imperative) and the principle of the freedom of civil legal relations (for example, the regulation of contracts), there are less categorical methods of regulation, for example, through a prescription. However, none of the laws of the Republic of Kazakhstan directly devoted to the organizational and legal forms of commercial organizations: "On State Property" (On state property, 2011), "On Economic Partnerships" (The Law About economic partnerships, 1995), On Limited and Additional Liability Partnerships [(On limited and additional liability partnerships, 1998)], "On Joint-Stock Companies" (About joint-stock companies, 2003) , and "On the production cooperative" from October 5, 1995 №2486 does not allow the possibility of creating a commercial organization by transforming it into a non-profit organization. In other words, there is no such permission.

CONCLUSION

Summing up this brief study of the legal status of agricultural cooperatives, it should be that the developers of the law on agricultural cooperatives violated the integrity of the system of organizational and legal forms of commercial legal entities that its creators, the authors of the Civil Code of the Republic of Kazakhstan, are proud of.

The new law eliminated many of the flaws and mistakes made in previous laws. Today, in many regions of the country, agricultural producers are increasingly expressing a desire to unite in cooperatives.

The new law establishes the following principles for the creation of agricultural cooperatives:

- voluntary entry into the agricultural cooperative and exit from it, the possibility of entry for any person;
- democratic governance based on equality of members of the cooperative: one member - one vote, regardless of the size and quantity of property (share) contributions, with the exception of associate members of the cooperative;
- election and accountability of the management bodies of the agricultural cooperative to the general meeting of its members;
- autonomy and independence of agricultural cooperatives;
- the agricultural cooperative sells goods (works, services) to its members at their cost price;
- mutual assistance and provision of economic benefits for members of the cooperative;
- availability of information on the activities of an agricultural cooperative, an association (union) of agricultural cooperatives for all their members.

Analysis of the development of the agro-industrial complex of the Republic of Kazakhstan shows that in order to increase agricultural production, to increase competitiveness and to ensure food security, it is necessary to create large commodity farms. Only in large commodity farms it is possible to conduct expanded production and introduce innovative technologies. The solution to this problem is the development of economic mechanisms for the association, merger of small farm into large commodity farms, mutual assistance and mutual responsibility to each other.

A study of the history of the development of cooperation in Kazakhstan shows that cooperation is a powerful ideological and economic force capable of solving complex problems in the world structure. The effective functioning of such production structures is possible with their proportionality, consistency, rhythm, rational economic relations and production relations. One of the forms of cooperation in Kazakhstan, which functioned for many years, was the collective farms, which were created with the aim of eliminating private ownership of land and for a rapid transition to socialism and communism. In the years of the emergence of Kazakhstan as an independent state in the 1990s, in order to boost and strengthen the economy of the agrarian sector, the government of the republic adopted a program on the denationalization and privatization of state agricultural and other agricultural enterprises. The mechanism of privatization led to the fragmentation of the former state and collective farms into medium and small farms. Subsequently, medium-sized farms turned into small ones, and small ones went bankrupt and filled up the ranks of households. Based on the above problems, it is necessary to create financial institutions in order to develop agricultural cooperation in Kazakhstan; provide state subsidies to agricultural cooperatives for the reimbursement of expenses for the payment of interest on loans and borrowings; improve the procedures for granting preferential loan.

Today, a wide circle of stakeholders is involved in the process of creating and developing agricultural cooperatives: government agencies, research and educational centers, business structures from both the agricultural and non-agricultural sectors, agricultural producers. And it should be noted that among them there is still no common understanding of the essence of cooperation in the agricultural sector, including both the production process and the types of work of a post-production nature (cleaning, storage, processing, marketing

and others). This causes certain difficulties in creating cooperatives, and first of all, farmers who are not fully aware of the key conditions and requirements set out in the new law face difficulties, which in turn contain provisions contrary to the norms of other laws of the country. This leads to further complication of the situation.

The main constraints to the development of cooperatives are: an imperfect mechanism for encouraging the unification of farmers into agricultural cooperatives; The lack of coordinating authorities in the cooperation of the union, including in the field of education, protection, accounting, registration, etc.; a high level of distrust of agricultural producers, especially small forms of management of the newly created structure, the fear of losing the main means of production - the land; low level of legal culture in the village, lack of awareness of farmers about the benefits of agricultural cooperatives (Musayeva, M. A., Diehard Rudert., 2015)

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GENDER-ROLE REFERENCES IN THE SOCCER CONTEXT

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ABSTRACT

It has been observed most of female soccer players in Iranian society enact the masculinity gender- role and try to be recognized as a boy. What happen to them with their entrance in the soccer? The aim of the present study was to answer this question by exploring the criteria and reference group in the Soccer context and the way that female soccer player accept them. 8 elite female soccer players on Iran Super League 2014, 2 head Soccer coaches, and 1 Soccer coach were interviewed by a qualitative research. The results indicated that there are numerous gender-role references in the soccer which is conflict with the Iranian society's gender-role references for women. These references divided into two categories as 1- General Gender-role References and 2- Special Gender-role References. It seems "special masculinity gender-role references" developed in soccer by their participants.

Key words: Female athlete, Gender-role behavior, Reference group, Soccer

INTRODUCTION

Sports can be ranked as the degree to which participants display the qualities of the masculine or feminine gender role. Sports like gymnastics, cheerleading and ice-skating were identified as feminine. Sports like rugby, boxing and football were identified as highly masculine. In Iran, some sports like swimming, badminton, walking, physical fitness, aerobics and running are favorite for women traditionally (Tondnevis, 1996; Zaree, 2001) while the favorite sports for men are football, swimming, body building (Tondnevis, 1996; Zaree, 2001; Safania, 2001; Mozafari, & Safania, 2002), martial art sports and climbing (Zaree, 2001; Safania, 2001). Female athletes who participate in masculine sports are required to depict a high number of traits associated with the masculine gender role. For example, soccer players are required to tackle opponents and fight aggressively over the ball. Female soccer players may be seen as violating social expectations for women, especially feminine expectations such as tenderness, compassion, gentleness, soft-spoken manner and sensitivity to the needs of others. When women adopt the more masculine qualities required in athletic participation, they act in opposition to many of the feminine behaviors expected for women. It has been observed most of female soccer players in Iranian society enact the masculinity gender- role and try to be recognized as a boy. Some authors suggested most of women player in man's sport violate ascribed gender roles for women (Desertrain & Weiss, 1988; Sage & Loudermilk, 1979). Fallon and Jome (2007) wrote rugby is perceived to be a traditionally masculine sport, and women who play rugby are assumed to enact the masculine gender role (Fallon & Jome, 2007). Women's participation in sports is sometimes seen as a social aberration (Disch & Kane, 2000) and women who play masculine's sports are sexually suspect (Lenskyi, 1999). Signs of some research on the status of female athletes have shown that women's sports participation is usually associated with the negative beliefs from the community (Miller & Levy, 1996). Because the traditional images of sports are incompatible with the traditional role of women (Desertrain & Weiss, 1988; Miller & Levy, 1996). For example, a woman may be directed to engage in aggressive acts by her coach, but her parents or partner may send her messages that they

expect her to display nurturing and sensitive behaviors. Thus an athlete can hear expectations for her behavior from the important people in her life, which she can choose to fulfill or disregard. This issue has several negative consequences for athletic women, such as conflicts with parents and spouses, and even doubts about the sexual orientation (Lenskyi, 1999), which in some cases even leads to the collapse of the family. Additionally, female athletes appear to differ from non-athletes in their (norm) role of femininity attitudes (Miller & Levy, 1996; Marsh & Jackson, 1986; Hall & et.al, 1986; Burke, 1986; Salisbury & Passer, 1982). In the other words, their attitudes about the norm of femininity and gender are different from those of other women in the society. The scope of effect of the norms extends to all aspects and social life of individuals. In all these cases, the norm in different formats plays the role of reference for assessing the status, action, evolution, as well as the detection of the degree of deviation. Hence, the existence of references is required for the understanding the current situation and activity and also to diagnosis if their course has been distorted (Bagheri, 2016). Reference group (norm) guides the personal and social actions of a person (Bagheri, 2016). As a result, the choice of norm is the basis for defining normality and abnormality properties. Normative realization is carried out by social institutions in family, educational and health system, macro social and cultural policies (Bagheri, 2016). However, most of Iranian female soccer players show masculinity gender-role that is discrepant with their femininity characteristics. It seems these behaviors are abnormal as a result of they try to demonstrate they are like a boy. Therefore, it is important to find the reasons of these abnormal gender-role behaviors. A new theory was developed by Bagheri (2014 & 2016) about the role of reference group on behavior which is titled "a three functional model of norm"(Bagheri, 2016; Bagheri, 2014). Regarding this theory reference group (norm) has the role of criterion for three task 1- evaluation, 2- judgment and 3- guide the actions. The references are essentially for the perception of behaviors and activities. In fact, the importance of references as a criterion is salience for guiding the actions and reference groups have important role for guidance and destiny of people (Bagheri, 2016; Bagheri, 2014). In addition, according to Bagheri (2014 & 2016) reference or criterion is selected from contexts, cultural and social networks and environments (Bagheri, 2016; Bagheri, 2014).

According to the "Context Effects in Perception"¹ law (Hagendorf & et.al, 2011), the norm (criteria or references group) in the field of human communication includes various contexts, such as peer, cultural, political, occupational, educational, recreational groups, consumer and cultural goods styles, media, tendencies to patterns, or people who are reference like the stars, heroes and lovers (Bagheri, 2016). As explained, the kind of selected context as a reference influences the way of evaluation and judgment. Evaluation is in the form of emotions such as sense of aversion, hate, attraction, humiliation, admiration, Modernity, honor, shyness, and all other states. Judgment is in the form of the distinction between friend and enemy, insider and stranger, opportunity and threat, perfect and non-perfect, patient and healthy, about objects, other people, self, and about beliefs, cultures, groups, books and values (Bagheri, 2016; Bagheri, 2014). Therefore, what are the references attributed by context of soccer which female soccer players violate the ascribed gender roles for women? Why the women enact the masculinity gender-role when they pursue soccer? Is there any reference group in soccer which effects on the perception of women soccer players and then their gender- role behaviors? In the current study, the "a three functional model of norm" (Bagheri, 2016; Bagheri, 2014)was used to answer these questions.

¹ Context contingent

METHODOLOGY

The findings of Zamanian and et al. (2014) about classify the masculinity of some sports from perspective of Iranian society gave the soccer the first place in masculinity characteristics (Zamanian & et. al, 2014).

Therefore, Soccer was chosen as the sport of investigation because it represents a very masculine and nontraditional sport for women in Iran [18]. 8 Women soccer players who played on Iran Super League 2014, 2 head Soccer coaches, and 1 Soccer coach voluntary were interviewed. Criteria for inclusion in the study were: (a) the player had been playing soccer for the two seasons immediately prior to the interview, (b) the player was on the current team roster for 2 years and this team was in the super league roster in this 2 years, (c) the player had no major injuries that prevented her from participating in team matches, and (d) In order to gain deep and accurate experiences, athletes must practice at least 10 hours per week during the matches' season (Safania, 2001), (e) their health have been approved by the physical health and hormonal tests which are conducted by the 2013 Medical Committee and (f) the coaches had been committing for these 2 season in the current team.

Data collection was finished until getting the theoretical saturation. At the first, every woman soccer teams asked a general question: "how soccer effects on female soccer players' femininity and their gender-roles". Then, a deep interview in form of semi-structured continues based on participants' answers. Interview guidelines were design for every participants regarding to the previous interviews and based on literature and Bagheri's theory (Bagheri, 2016). The interviews were between 60 to 90 minutes in length. All interviews were recorded and then written word by word. Finally, interviews were analyzed by qualitative method in concepts, constructs and categories.

ETHICAL CONSIDERATIONS

Information about the research was provided both verbally and in writing through the consent letter which was given to the participants. Their interviews would be recorded if they allowed the researcher. It was told interviewees that they could withdraw from participation at any stage of the study and assured them that their words will be completely confidential.

RESULTS

Based on interviews, the behavior of female soccer players is influenced by the gender-role references in the soccer. Numerous gender-role references have emerged in the female soccer context. According to the findings, these references were classified into two groups: 1- General Gender-role References (criteria) 2- Special Gender-role References (criteria).

Soccer gender-role references which refer directly to the characteristics of soccer is known as "general gender-role references". Because all soccer players need these references to succeed in soccer and they must follow them to win.

Other gender-role references related indirectly to the soccer is called as "special gender-role references". Because it is unique and is created by female soccer players. Each players chooses all or some of these references based on his personality traits.

Participant (number 10) expressed about the "general gender-role references":

"Soccer is attributed to the men and it is a masculinity sport. Therefore, success in the soccer needs to have the masculine characteristics such as fighter, brave, courageous, strong, powerful, fearless. As well as, the masculinity stereotypes about soccer lead to change in the gender-role by female soccer players". Hence, the general criteria for the success in the soccer are "create horror", "rough", and "mannish and masculine".

Participants (number 8) said about "especial gender-role references": "Coaches and spectators admire the female players who have short hair. Often, coaches believe that the "short hairs" play soccer better than the players with long hair. Short hairs' play is flashed better in the eyes. On the other hand, Players usually worry to face to the opponents with short hair in the competitions. Because of this thinking, most of female soccer players try to cut their hair and change their femininity for accepted by coaches and fans and for create fear and horror to the opponents". Gradually, female soccer players produce criteria which lead to show them more masculinity; as the participant number 9 explained:

"A female soccer player, who tries to have a boy style, does some things. At the first, she cut her hair. Then she wears like a boy and hides her breasts. She changes the way that she speaks and her gait. Gradually, she feels she is a boy. She thinks like a boy and changes her femininity to the masculinity gender roles. Progressively, these behaviors become reference (criteria) in the female soccer context.

Since these special gender-role references (criteria) are similar to the male gender role, gradually develop a new phenomenon among female soccer players that in this study was called "changed gender role".

Some objective indicators of "special gender-role references" as were interpreted by participants included:

Short hair, wearing like boys, without any make up, Thicken the sound and tone of the speaking, doing gait and hand movements like the boys, use the male hormones, use the Smoking, indulge in boyish behavior several times more that of a regular guy, deny their gender as a girl, select the boy names for herself, hid the breasts, deny the female menstruation, exhibit the men's manner and behaviors and so on.

DISCUSSION

The questions addressed in this study were:

- 1- What are the references attributed by context of soccer?
- 2- Why the women enact the masculinity gender-role when they pursue soccer?
- 3- Is there any reference group in soccer which effects on the perception of women soccer players?

Regarding the Bagheri Theory (Bagheri, 2016), selecting the references is done through the contexts, communities, social networks and cultural networks; and it can effect on the individuals' perception of him/ his self and objects (Bagheri, 2016). Therefore, when a woman enters to a social context like soccer, she involves the new references related to the masculinity gender-role which violate ascribed gender roles for women in the community of Iran.

For answer to the question one, this research finds two groups of references in the soccer context: 1- "General Gender-role References" and 2- "Special Gender-role References". The references are necessary for the success in the soccer, directly related to playing soccer that named as "general gender-role references". For instance, she should be rough, harsh and strong to make opponents' feel of horror, should show the men' zeal when the coaches shout or punish her during the competitions and training sessions. Because soccer is masculinity sport which needs masculinity characteristics not femininity behaviors such as Yielding, Tender, frustration and offend (Bem, 1974). Other references which are named "special gender-role references" indirectly related to the playing soccer that created in the soccer context by participants. For example, masculinity stereotypes about soccer and attention to the female soccer players with short hair by fans and coaches lead to women soccer players internalize the masculinity gender-roles. With the slight changes in their gender-roles, the masculine gender-roles start to produce by female soccer players and become larger, more and more extreme every

moment. Therefore, by pursuing soccer, these references are accepted gradually by players or are induced by their teammates, coaches, spectators and fans in their minds. Then, they try to exhibit male gender roles as an excellent soccer player. Experienced participants believe: "these days changes in the gender-role in the female soccer context are going to become worse. At the first, when Iranian women enter to the soccer, they just cut their hair". Regarding to the age of female soccer in Iran (8 years), we can understand how quickly the special gender-role references are grown and produced by women soccer players. Most female soccer players think that they could be confirmed if they accept the special gender-role reference and act in the boyish manner and masculinity behaviors. Hence, they progress and grow their masculinity characteristics and create the new boyish behaviors. For example, beside of cutting their hair, they wearlike boys, hid their breasts, deny their female menstruation and so on. Female soccer players called these people as "boy style". It is one of the reasons that female soccer players enact the masculinity gender-role when they pursue soccer. To answer the question two about the occurrence of these gender role change behaviors in female soccer players and question three about the effects of gender-role references group on their perception can be also described based on the theoretical model of "A three functions model of norm" (Bagheri, 2016). According to Bagheri (2014 & 2016), references (criteria) guide the behavior (Bagheri, 2016; Bagheri, (2014). This means, perception on based on three duties of criteria (evaluation, judgment and guidance of human actions) does its three tasks including: 1- object recognition, 2- spatial localization and 3- perceptual constancy. In fact, perception carry out its object recognition task by evaluation according to the criterion and two tasks of spatial localization and perceptual constancy by judgment and guidance in accordance with the criterion respectively (Bagheri, 2016). Selecting the references is done through the contexts, communities, social networks and cultural networks (Bagheri, 2016). Therefore, when a woman enters the social soccer community, she will pass a process for choosing this social context as a criterion or reference. In the first step, when a woman enters in the soccer, she faces expectations and criteria of the group. The objective indicators of these criteria are haircuts, the type of cover, the shape of behaviors, and more; these players should be more violent, masculine, and horrific to create a sense of fear in the opponent. In fact, violent, masculine, horrific and the creation a sense of fear are criteria (references) in the group. In result, criteria of this social context create "normality" and "abnormality". For example, if a female soccer player behaves very feminine, she is considered as "abnormal" in the soccer team.

Choosing the criteria is the basis for defining a characteristic of "normality" and "abnormality" in which guides the individual acts specially and socially. The analytic studies of Michle Foucault M. about power, one of the most influential thoughts about the role of normal and abnormal concepts, points to the importance of the norm for the fate of a community and its people (Link, 1998). According to Foucault's view, any society tends to normalize its social space by dividing the normal from abnormalto a homogeneous and hierarchical space. Because of this normality of the social space, people choose between the two tendencies of conformity or divergence and deviation of criterion (Link, 1998). In the second step, they must do conformity or divergence with the criteria (references) of the group. Since individuals must internalize their criteria for admission to the group (Moradi, 2008), Most of female soccer players begin to conform to the gender-role references in the soccer team. Conformity makes her as a part of the soccer group. Actually, in this way, a female soccer player could be accepted by the group of soccer players. Then she can progress more easily her soccer career and without any ban or trouble from her teammate or others in this social context.

Through these processes, the third step is the process of setting herself with the references of group and its criteria. Therefore, with the institutionalization the references group and criteria, the feelings, thoughts, ideas of soccer women are gradually being influenced (Bagheri, 2016). In the other words, the evaluation, judgment and guidance of the individual are affected; the individual's evaluation of him/ his self is changed, and him/ her actions and behaviors are done differently (Bagheri 2014 & 2016). Hence, according to Bagheri (2014 & 2016), seemingly stable concepts like gender can be changed by selecting the type of context, and changing in its standard criteria. In this situation, individual can not perceive him/his self as different from the norm, in spite of intense changes (Bagheri 2014 & 2016). For example, in the perception recognition, when she evaluate his self by soccer criteria, She feels she needs for success in the soccer to shorten her hair, Wears like boys, be rough to create a sense of fear in the opponents. In addition, In order to increase self-esteem and acceptability in the group, she should do as boys' behaviors; because soccer is a masculine sport. Another task of perception is judgment. Judgment shows the emotional outputs in the form of aversion, tendency, avoidance, disdain, pride, and pride (Bagheri, 2016).

For example, when she wears girly dresses, she has a sense of being dissatisfaction, but she feels good when she wears a boys' dress. She hates feminine makeup and elegant girlish behavior. She has a sense of humiliation in her breasts and menstrual period. They hate of her girly name, and when they are called boys, they are filled with joy and pleasure. Therefore, in addition to the evaluation, her judgment has also changed, and as a result, she guides her actions in a different way attributed to a girl.

CONCLUSION

Overall, female soccer context of Iran act as a reference and now it is image of girls who change ascribe gender-roles for women. Soccer context is trying to make a homogenous environment and become a norm. Based on the theoretical model of Bagheri (2016), this condition can change the perception of some women soccer players and then their gender- role behaviors (Bagheri, 2016). Since individuals learn quickly and internalize behaviors and actions in the friendship groups like sport, this issue needs more and up-to-date investigations.

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THEORIES IN BI&A RESEARCH

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ABSTRACT

Business intelligence and analytics (BI&A) has become commonly researched topic in the areas of business and management information systems and many qualitative literature reviews can be found to show the current body of knowledge. But no study exists that would show the state of the art from the perspective of theoretical paradigms used in BI&A studies, therefore this paper offers an insight into theoretical foundations of BI&A research based on relevant publications between 1990 and 2016 from Web of Science databases. A quantitative bibliographic method of bibliographic coupling is used to detect the relevant publications and the qualitative analysis is carried out to identify the theoretical paradigms in selected publications and to classify them into originating areas within BI&A research. After the results analysis, the conclusion and the boulevards for further research are given. Proposed study enables the researchers to better understand the current state of used theories in the BI&A research.

Keywords: Business information systems, Business intelligence and analytics, Scientometrics

1. INTRODUCTION

Business intelligence and analytics (BI&A) is becoming important topic in business and management information systems and many researchers tackles it within their studies and the field of BI&A has been widely researched during the past decades from the practical and theoretical points of view, the latter being mostly qualitatively supported. However, to the best of our knowledge, there is a lack of literature reviews that would show the current state of the art in the area in the terms of theoretical paradigms that have been employed by researches while studying the BI&A. To address this issue presented research first quantitatively extracts the relevant publications from the BI&A extant literature using bibliometric method of bibliographic coupling and then applies a structured qualitative approach to match the BI&A publications with theoretical paradigms enabling their classification into several originating areas.

The rest of the paper has four sections. The first section briefly describes existing literature and theory. The second section provides the methodology used and explains the data collection process as well as identification of the most relevant publications. The second section presents results in terms of theoretical foundations of BI&A research offering insights into each of identified originating area with respect to theories used. Conclusion with potentials for further research are given in the last section.

2. LITERATURE & THEORY

Since the first mention of the BI&A concept [1] many different definitions can be found in the literature while the most frequently used has been proposed by [2] describing BI&A as a set of various techniques and tools for critically analyzing the companies' data to assure better decision-making process. In the last 30 years the number of researches in BI&A filed constantly grows basing on several different theories and methodologies and many literature reviews have been published to reflect the different characteristics of the area [3,4,5,6].

In addition to traditional literature review the current state of the art in specific area can be reflected using bibliometrics. While the traditional literature reviews suffer from subjectivity of researchers, a quantitatively based bibliographic methods ensure objectivity of the research findings. Several bibliographic methods exist. The most popular one in the recent history has been a citation analysis. It is based on the number of citations and

shows the most cited studies, authors or journal in the area [7]. The next one is a co-citation analysis, which is used to quantify the content similarity between publications, authors and journals using the frequency of two publications being cited together in one paper [8,9, 10]. The next one is the bibliographic coupling, which was also used in presented research. Selected method identifies the relationship between publication, authors or journals based on quantity of references common to two publications [11]. Higher the amount of overlapped references is, stronger is the relationship of two publications. In comparison to other bibliographic method a bibliographic coupling is not time affected since the number of shared references by two publications does not change [12,13].

3. METHODS

Presented section explains methodology used to extract the BI&A publications from the relevant databases, describes applied bibliometric method to identify the most relevant publications for this research and explains the qualitative approach used to identify originating areas based on theoretical paradigms.

3.1 *The BI&A Publications Retrieval*

Relevant publications from the area of BI&A were identified through the acknowledged online publication platform Web of Science (WoS), which has been widely used for bibliometric analyzes of specific fields [14]. The following databases within WoS have been used: Social Sciences Citation Index (SSCI), Social Science Citation Index Expanded (SCI-EXPANDED), and Arts & Humanities Citation (A&HCI) Index. We have set the search strings “business intelligence,” “business analytics,” or “business intelligence and analytics” to be included in the title or topic of the individual publication considering the following subject categories: business, management, business finance, economics, library science, social science, information science, multidisciplinary science, interdisciplinary and computer science information system. The observation period was set in time window from 1.1.1990 to 30.8.2016. After qualitative examination of all found records 1123 publications have been extracted from the WoS to be examined by the bibliographic coupling, which consisted of 21893 cited references.

3.2 *Identification of the Most Relevant BI&A Publications Applying Bibliographic Coupling in Selected Software Solution*

The method of literature review, as one of the most widely used techniques to review prior and relevant literature in the area offering a basis for further progress of the field [15], was complemented by a bibliographic method of bibliographic coupling to extract the relevant scientific papers from the BI&A area. Bibliographic coupling was selected as it is recognized in the literature as the most accurate method for representing the state of the art of the specific area [16, 7].

Various software solutions are available for appliance of bibliographic coupling. While the BibExcel, Sitkis and SciMat have been used widely in the past [7], nowadays the VOSviewer, a specialized software tool for constructing, analyzing and visualizing bibliometric networks [17], has gained on a popularity and was used for purposes of presented study. To construct the bibliographic structure the unit of analysis was set to documents and the association strenght method has been considered for nomalization of the strength of the relationships among the publications. WoS resulted in 1123 coupled publications and on the basis of the total coupling link strenght the 100 most influential publication have been selecteted for the analysis.

3.3. *Theoretical Paradigms and Originating Areas*

All of 100 considered publications have been qualitatively analyzed, out of which for 75 publications it was possible to identify theoretical paradigms used. The rest of publications (25) were not considered in this study.

Based on the analyzed publications the theories were classified into four originating areas with respect to selected BI&A literature.

4. RESULTS

This section presents the theoretical foundations of BI&A research based on qualitative examination of identified papers. The theories have been classified into four originating areas that are presented in the Tables 1, 2, 3 and 4 followed by the short analysis. The list of publications is provided in the Appendix I.

Table 2
Originating area: Strategic management

Theories	Publications authors and years*
Resourced-based view	Cosic, R., Shanks, G., & Maynard, S. B. (2015); Shuradze, G., & Wagner, H. T. (2016, January); Shanks, G. G., & Bekmamedova, N. (2012, June); Wieneke, A., & Lehrer, C. (2016); Santiago Rivera, D., & Shanks, G. (2015); Bekmamedova, N., & Shanks, G. (2014, January); Krawatzeck, R., & Dinter, B. (2015); Ittmann, H. W. (2015); Kasemsap, K. (2015); Olszak, C. M. (2016); Weng, S. S., Yang, M. H., Koo, T. L., & Hsiao, P. I. (2016); Singh, H., & Samalia, H. V. (2014); Azevedo, A., & Santos, M. F. (2010); Wang, H. C. (2014).; Sangari, M. S., & Razmi, J. (2015); Rouhani, S., Ashrafi, A., Zare Ravasan, A., & Afshari, S. (2016).
Knowledge-based view of the firm	Peters, M. D., Wieder, B., Sutton, S. G., & Wakefield, J. (2016); Erickson, S., & Rothberg, H. (2013, October); Erickson, G. S., & Rothberg, H. N. (2014); Eom, S. (2014).
Dynamic capabilities perspective	Shuradze, G., & Wagner, H. T. (2016, January); Shanks, G. G., & Bekmamedova, N. (2012, June); Wieneke, A., & Lehrer, C. (2016); Sharma, R., Mithas, S., & Kankanhalli, A. (2014); Chae, B., & Olson, D. L. (2013); Fernández, A., del Río, S., López, V., Bawakid, A., del Jesus, M. J., Benítez, J. M., & Herrera, F. (2014); Bekmamedova, N., & Shanks, G. (2014, January); Kowalczyk, D. W. I. M., & Buxmann, P. (2014); Spruit, M., & Sacu, C. (2015); Olszak, C. M. (2014, September); Işık, Ö., Jones, M. C., & Sidorova, A. (2013); Sangari, M. S., & Razmi, J. (2015).
Absorptive capacity	Elbashir, M. Z., Collier, P. A., & Sutton, S. G. (2011).
Ambidexterity theory	Kowalczyk, M., & Buxmann, P. (2015).
Theory of critical success factors	Eybers, S., & Giannakopoulos, A. P. (2015, September); Yeoh, W., & Koronios, A. (2010); Olszak, C. M. (2016); Bole, U., Popovič, A., Žabkar, J., Papa, G., & Jaklič, J. (2015); Audzeyeva, A., & Hudson, R. (2016); Yeoh, W., & Popovič, A. (2016); Mohamadina, A. A., Ghazali, M. R. B., Ibrahim, M. R. B., & Harbawi, M. A. (2012, November); Anjariny, A. H., Zeki, A. M., & Hussin, H. (2012, November); Anjariny, A. H., & Zeki, A. M. (2014, December); Anjariny, A. H., & Zeki, A. M. (2013, December).
Maturity models	Thamir, A., & Theodoulidis, B. (2013, October); Olszak, C. M. (2016); Olszak, C. M. (2013, September); Chuah, M. H., & Wong, K. L. (2012); Chuah, M. H., & Wong, K. L. (2012); Olszak, C. (2013, February).
Co-agency theory	Foshay, N., & Kuziemy, C. (2014).

*The full references data are provided in the Appendix I.

As it can be seen from the Table 1 the most widely applied theory in the Strategic management area is a Resourced-based view theory relating BI resources to company performance followed by the Dynamic capability perspective theory exploring capability of BI resources increasing companies' competitive

advantages. Another important theory is related to Critical success factors, since it is vital for the companies to identify factors for successful BI implementation into their daily performances. Knowledge-based view of the firm and Maturity models are used occasionally when researching BI&A, while Absorptive capacity, Ambidexterity theory and Cogency theory are rarely considered.

Table 2
Originating area: Information systems

Theories	Publications authors and years*
The Delone and McLean IS success model	Grublješič, T., & Jaklič, J. (2015); Foshay, N., Taylor, A., & Mukherjee, A. (2014); Popovič, A., Coelho, P. S., & Jaklič, J. (2009); Hou, C. K. (2012); Popovič, A., Hackney, R., Coelho, P. S., & Jaklič, J. (2012); Popovič, A., & Jaklič, J. (2015); Wieder, B., & Ossimitz, M. L. (2015); Grublješič, T., & Jaklič, J. (2015); Gonzales, R., Wareham, J., & Serida, J. (2015).
Technology acceptance model (TAM)	Tijssen, R., Spruit, M., van de Ridder, M., & van Raaij, B. (2011); Grublješič, T., & Jaklič, J. (2015); Foshay, N., Taylor, A., & Mukherjee, A. (2014); Popovič, A., Coelho, P. S., & Jaklič, J. (2009); Grublješič, T., & Jaklič, J. (2015).
Unified theory of acceptance and use of technology	Grublješič, T., & Jaklič, J. (2015).
Diffusion of innovations theory	Yoon, T. E., Ghosh, B., & Jeong, B. K. (2014, January); Brooks, P., El-Gayar, O., & Sarnikar, S. (2015).
Task-technology fit theory	Brooks, P., El-Gayar, O., & Sarnikar, S. (2015).
Technology-organization-environment (TOE) framework	Burnay, C., Jureta, I. J., Linden, I., & Faulkner, S. (2016); Grublješič, T., & Jaklič, J. (2015).
Motivation theory	Li, X., Hsieh, J. P. A., & Rai, A. (2013);

*The full references data are provided in the Appendix I.

The most widely applied theory within the area of Information systems relates to The Delone and McLean IS success model considering the user satisfaction, intention to use, and net benefits from the BI use. The second most commonly used theory was Technology acceptance model (TAM) undertaking the usefulness of BI systems. Diffusion of innovations theory, Motivation theory and Technology-organization-environment (TOE) framework are used occasionally, while Unified theory of acceptance and use of technology and Task-technology fit theory are used rarely.

Table 3
Originating area: Organizational behavior

Theories	Publications authors and years*
Information processing view	Cao, G., Duan, Y., & Li, G. (2015); Kowalczyk, D. W. I. M., & Buxmann, P. (2014); Ferrari, A. (2011); McCormack, K., & Trkman, P. (2014); Trkman, P., McCormack, K., De Oliveira, M. P. V., & Ladeira, M. B. (2010); de Oliveira, M. P. V., McCormack, K., & Trkman, P. (2012).
Contingency theory	Ebner, K., Bühnen, T., & Urbach, N. (2014, January); Cao, G., Duan, Y., & Li, G. (2015)
Institutional theory	Ramakrishnan, T., Jones, M. C., & Sidorova, A. (2012).

*The full references data are provided in the Appendix I.

The most widely applied theory within the area of Organizational behavior relates to Information processing view, which was used to bridge the gap between information processing needs and information processing capabilities. Follows the use of Contingency theory, while the Institutional theory is used occasionally.

Table 4
Originating area: Design science

Theories	Publications authors and years*
Design science	Kao, H. Y., Yu, M. C., Masud, M., Wu, W. H., Chen, L. J., & Wu, Y. C. J. (2016); Sangupamba, O. M., Prat, N., & Comyn-Wattiau, I. (2014, October); Mwilu, O. S., Comyn-Wattiau, I., & Prat, N. (2015); Arnott, D., & Pervan, G. (2014); Foshay, N., Yeoh, W., Boo, Y. L., Ong, K. L., & Mattie, D. (2015); Shollo, A. (2011); Hartl, K., Jacob, O., Mbep, F. L., Budree, A., & Fourie, L. (2016, January).

*The full references data are provided in the Appendix I.

Within this study we considered Design science as its own originating area, since many publications considered it in their researches and applied it to many various areas of BI&A, i.e healthcare, finance and performance management. Analysis showed that Design science was primarily used to upgrade the behavioral science to design, implement and use BI&A systems in companies as well as to point out the practical relevance of BI&A research.

5. CONCLUSION AND FUTURE WORK

Presented study shows the current state of the art in the area from the perspective of theoretical paradigms considered in BI&A publications. Based on the bibliographic coupling 100 most relevant BI&A publications were identified and qualitatively analyzed to link the BI&A publications with theoretical paradigms allowing for their classification into four originating areas, namely Strategic management, Information system, Organizational behavior and Design science. Even though the study rely on publications from WoS as a scientific database, which does not necessary include all possible BI publications, the presented research sufficiently complements the former studies implying the research diversity of BI&A [2,17,18,19] and offers interesting insights on the current state of the area enabling researchers to better understand the theoretical underpinnings of the BI&A field. In the future studies researchers could include additional search strings to be used for bibliographic analysis as well as apply some other bibliographic methods to supplement the presented findings.

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APPENDIX I: FULL REFERENCES DATA

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THE DIFFERENCE OF CHINESE TOURISTS' POPULATION AND SOCIAL FACTORS TOWARDS THEIR SATISFACTIONS IN CULTURAL TOURISM ATTRACTION PLACE MANAGEMENT WHILE VISITING WAT RAKHANG KOSITARAM, BANGKOK

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ABSTRACT

This study on “The Difference of Chinese tourists’ population and social factors towards their satisfactions in cultural tourism attraction place management while visiting Wat Rakhang Kositaram, Bangkok” aimed to study population and social factors of 400 Chinese tourists who visited the temple and compared their satisfactions towards cultural tourism attraction place management. A researcher selected these samplings (Chinese tourists) by using a convenience sampling method. The researcher used percentage, Mean, and standard deviation to analyze data. She used t-test and F-test to compare independent and dependent variables. She also used a multiple comparison through the Scheffe’s statistic test for a comparison when found the variance in statistics.

The research results found that most sampling tourists were female (219 persons, 54.8%). Samplings mostly aged 30-45 years old (214 persons, 53.5%). They mostly graduated bachelor degree (203 persons, 50.7%). In terms of occupation, most samplings were scholars (138 persons, 34.5%). A difference influenced different satisfaction levels towards cultural tourism attraction place management at the statistical significance level .000. And, if analyze per pair by using Sheffe’s statistic test found that aged lower than 30 years and aged range 30-45 years had a different statistical significance level at .001. Different educational levels influenced different satisfactions towards cultural tourism attraction place management at the statistical significance level .003. Different occupations also influenced different satisfactions towards cultural tourism attraction place management at the statistical significance level .001.

In order to increase effectiveness of cultural tourism attraction place management, the researcher recommended that stakeholders of various cultural tourism attractions should promote, manage, and interpret meanings of cultural tourism to tourists so that they can perceive, realize, and aware of values of cultural tourism resources and resource preservation. The stakeholders should also increase relevant activities.

Keywords: Satisfaction, management, and cultural tourism

INTRODUCTION

Nowadays, several countries have promoted cultural tourism and invited tourists from different corners of the globe to visit. Culture is noteworthy to learn and gain for experiences, particularly outstanding culture and identity. Cultural tourism consists of historical places that indicate ways of life, antiques and religious buildings. In Thailand, religious tourist attraction places are temples (“Wat” in Thai) as hold beautiful architecture designs and arts that indicate Thai identity and performances of artists in different eras in the past. Temples also indicate beliefs of villagers that they respect temples as a central spiritual belief for them. In Bangkok, Wat Rakhang Kositaram or Rakhangkhositraram Woramahavihan Temple for a full name is one of the famous temples that many Thai and foreign tourists visit. The challenges are, however, difference in cultures and languages, foreigners somehow misbehave such as dress inappropriately. Hence, this is a reason why the researcher conducted this research, which focused on studying population and social factors that influenced tourists’ satisfactions towards cultural tourism at Wat Rakhang Kositaram.

OBJECTIVES

1. To study population and social factors of Chinese tourists towards their satisfactions on cultural tourism attraction place management in term of values of cultural tourism resources, conservation knowledge and cultural tourism resource preservation awareness
2. To compare population and social factors of sampling Chinese tourists towards their satisfactions on cultural tourism attraction place management

Relevant literature review

Wat Rakhang Kositaram has a formal name as Rakhangkhositraram Woramahavihan Temple. Its previous name was Wat Bang Wha Yai. The reason why the name was changed to Wat Rakhang Kositaram was because a big bell was found in the RAMA I Reign at this place. This bell later was kept at the Emerald Buddha Temple. Later, five new bells were invented and kept at Wat Bang Wha Yai Temple which was later changed a name to Wat Rakhang Kositaram. This temple is historically imperative as it was a place where the first Buddhist supreme patriarch of the Buddhist priests of the Rattanakosin era stayed. It was also a place where a very well-known monk instructor 'Somdet Dto Phromrangsri or LuangPor Dto' stayed. This monk was popular on amulets. The tourist attraction points in this temple include a principle Buddha image called 'smile to the sky' (in a chapel); hall for keeping the scriptures (three connected houses); well (where found a big bell); stupa (architecture design since Ayuttaya epoch); and monument.

Arunporn Atimatmaitree and associates compared tourists' satisfactions toward Klong Hae Floating Market tourism management in Hat Yai District of Songkhla Province. They used questionnaires to collect data and used percentage, Mean, standard deviation, t-test, and F-test for data classification and analysis. The research found that the overall level of satisfaction of tourists towards the management of this floating market was at the moderate or medium level. Different sexes and levels of education of tourists did not influence to have different satisfactions towards the management at the statistical significance level 0.05. While, different salary caused different satisfactions towards the management of this floating market such as issues on parking areas and services of merchants at the statistical significance level 0.05 [1]. Another study was from the Research institute committee, Ramkhamhaeng University, Chalermphrakiat Campus, Nakhon Si Thammarat. This committee conducted a study on satisfactions of scholars towards information technology services of Ramkhamhaeng University of this campus. The research team used statistics, percentage, Mean, standard deviation, frequencies, and hypothesis testing to compare difference between personal factors and satisfactions in information technology services in three services (service system, steps of services, and performances of service providers). The team used t-test and F-test for data analysis. The research team found that the overall scholars' satisfaction towards services was at the high level. In addition, different sexes of scholars influenced their satisfactions towards information technology services in all three services. Scholars with different ages influenced their satisfactions towards the services in all three services [3].

Watsamon Chantadit conducted a research on satisfactions towards various factors by classifying according to attributes of population. The study found that different sexes influenced different satisfactions towards tourism places, and services of government agencies. On the other hand, their satisfactions towards local people, and shops (food and beverage shops) were not different. Differences of age, educational level, occupation, salary, and marital status influenced different satisfactions. Overall, tourism services provided by government agencies and shops (food and beverage) were different at the statistic significant level .05 [6].

Research hypothesis

Different population and social factors of tourists influence different satisfactions towards cultural tourism attraction place management.

METHODOLOGY

This study is about a comparison on population and social factors of tourists towards their satisfactions on cultural tourism place at Wat Rakhang Kositaram. This research is an experimental (quantitative) research by using questionnaires to collect data from 400 Chinese tourists who visited Wat Rakhang Kositaram (Table: Taro Yamane referred in Samermuen Lohakij [4]). These samplings were selected through a convenience sampling method in order to gain information of tourists on population and social factors and their perceptions on values of cultural tourism resources. The researcher compared and analyzed their population and social factors towards their satisfactions on cultural tourism place management. Population in this research were 8,757,646 Chinese tourists in 2016 (Department of Tourism, Ministry of Tourism and Sports. Tools for this research included structured questionnaires. The questionnaire consisted of two portions. The first portion contained population and social factors. The second portion contained topics on perception on values of cultural tourism resources; awareness towards cultural tourism resource preservation; knowledge on cultural tourism preservation, and satisfactions towards effectiveness of cultural tourism management.

Statistics for analysis

1. The researcher used percentage, Mean and standard deviation for generic information description, perceptions on values of cultural tourism resources, awareness towards cultural tourism resource preservation, knowledge about tourism resource preservation, and satisfaction towards cultural tourism place management.

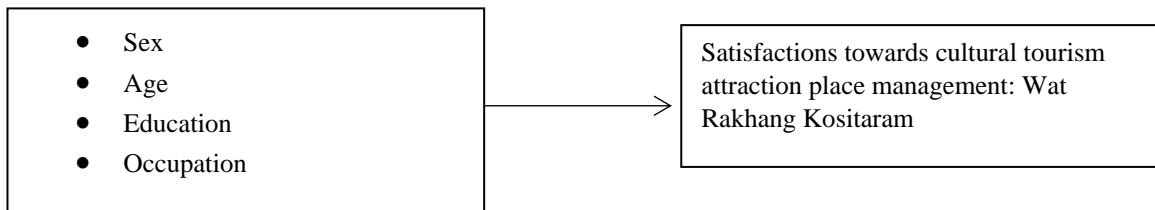
2. The researcher used t-test, F-test, and Sheffe’s statistic test to compare independent and dependent variables following the hypothesis by setting the statistical significance level at 0.05.

Conceptual framework

Independent variables: Sex, age, education, and occupation

Dependent variable: Satisfactions towards cultural tourism attraction place management:

Wat Rakhang Kositaram



RESULTS

Table 1

Amount and percentage classified by population and social factors

Population and social factors	Amount (%)
Sex	
Female	219(54.8%)
Male	181(45.3%)
Age	
< 30 yrs	166(41.5%)
30-45 yrs	214(53.5%)
46 and older	20(5.0%)
Educational level	
Lower than Bachelor Degree	153(38.3%)
Bachelor Degree	203(50.7%)
Higher than Bachelor Degree	44(11.0%)
Occupation	
Scholar	138(34.5%)
Government official	87(21.8%)
Business owner	50(12.5%)
Employee	53(13.3%)
Others	72(18.0%)
Total	400(100%)

From the table 1, it can be seen that samplings were females (219 persons; 54.8%) more than males (181 persons; 45.3%). Most samplings aged between 30-45 years old (214 persons; 53.5%), followed by samplings aged lower than 30 years old which were 166 persons (41.5%), and samplings with aged 46 and older (20 persons; 5%). Most samplings obtained Bachelor Degree (203 persons; 50.7%); followed by lower than Bachelor Degree

for 153 persons or 38.3 percent; and higher than Bachelor Degree for 44 persons or 11.0 percent. In terms of occupation, most samplings were scholars (138 persons; 34.5), followed by government officials (87 persons; 21.8%), and other occupations which were 72 persons (18.0%) such as housekeepers, employee (53 persons; 13.3%), and business owner (50 persons; 12.5%).

Table 2
Mean and S.D of variables

Topics	Amount	Min	Max	Mean	Std. Deviation
Perception on values of cultural tourism resources					
Value on architecture design	400	1	4	1.48	0.81
Value on faith and belief	400	1	5	2.35	1.18
Value on social and culture	400	1	5	2.37	1.31
As source of knowledge that reflects ways of life in the past	400	1	5	2.24	0.95
Value that worth for preservation for younger generation	400	1	5	3.41	0.98
Overall value appropriate as cultural tourism resource	400	1	4	1.81	0.80
Awareness towards cultural tourism resource preservation					
You trash your garbage in a bin every time you visit the temple.	400	2	4	3.11	0.55
You take your shoes off every time when entering a chapel or sanctuary.	400	2	5	3.44	0.74
You dress neatly every time you visit the temple.	400	2	4	3.27	0.67
You practice following the temple's prohibitions and regulations.	400	1	5	3.54	0.90
You are pleased to attend the temple's tourism resource preservation.	400	1	5	2.84	1.07
Overall, you are a person who are aware on tourism resource preservation	400	1	5	3.28	1.25
Knowledge on tourism resource preservation					
You note that you should not ruin historical place	400	1	5	3.76	.905
You note that you should not cause pollution in tourism place	400	3	5	3.96	.663
You note that you should not destroy every kinds of resource in tourism place	400	1	5	3.49	1.10
Satisfaction towards effectiveness of cultural tourism management					
You satisfy with cultural tourism place management you visit	400	1	5	2.88	1.08

Table 3
Comparison on sex and satisfactions towards cultural tourism attraction place management

Sex		Sex		t	P-value
Male	Female	Male	Female		
Amount	Mean	Amount	Mean	1.369	.172
181	2.96	219	2.81		

The table showed that samplings who had different sexes did not cause different satisfactions on different cultural tourism attraction place management at the statistic significance level .05.

Table 4
Comparison on age and satisfactions towards cultural tourism attraction management

Age						F	P-value
< 30 yrs		30-45 yrs		46 and older			
Amount	Mean	Amount	Mean	Amount	Mean		
166	2.66	214	3.08	20	2.60	8.138	.000

The table showed that samplings with different population factor which (age) had different satisfactions towards cultural tourism place management at the statistical significance level .000. And, the analysis per pair by using the Sheffe's statistic test found that aged lower than 30 years old and aged range 30-45 years old had different satisfactions at the statistic significance level .001 as shown on the table 5.

Table 5
Comparison on age and satisfactions towards cultural tourism attraction place management classified the difference by per pair

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.
< 30 yrs	30-45 yrs	-.423*	.110	.001
	46 and older	.057	.251	.975
30-45 yrs	< 30 yrs	.423*	.110	.001
	46 and older	.479	.248	.157
46 and older	< 30 yrs	-.057	.251	.975
	30-45 yrs	-.479	.248	.157

Table 6
Comparison on educational level and satisfactions towards cultural tourism attraction place management

Educational level						F	P-value
Lower than Bachelor Degree		Bachelor Degree		Higher than Bachelor Degree			
Amount	Mean	Amount	Mean	Amount	Mean		
153	2.84	203	3.01	44	2.41	5.868	.003

From the table, it can be seen that samplings with population factor on different educational level influenced different satisfaction in cultural tourism place management at the statistical significance level .003. And, the pair analysis by using the Sheffe's statistic test and found that samplings with Bachelor Degree and samplings with higher than Bachelor Degree had different satisfactions at the statistical significance level .004 as shown on the table 7.

Table 7
Comparison on educational level and satisfactions towards cultural tourism attraction classified the difference by per pair

(I) Educational level	(J) Educational level	Mean Difference (I-J)	Std. Error	Sig.
Lower than Bachelor Degree	Bachelor Degree	-.167	.114	.346
	Higher than Bachelor Degree	.434	.183	.061
Bachelor Degree	Lower than Bachelor Degree	.167	.114	.346
	Higher than Bachelor Degree	.601*	.178	.004

Higher than Bachelor Degree	Lower than Bachelor Degree	-.434	.183	.061
	Bachelor Degree	-.601*	.178	.004

Table 8

Comparison on occupation and satisfactions towards cultural tourism attraction place management

Occupation										F	P-value
Scholar		Government official		Business owner		Employee		Others			
Amount	Mean	Amount	Mean	Amount	Mean	Amount	Mean	Amount	Mean		
138	3.13	87	2.63	50	2.96	53	2.94	72	2.60	4.493	.001

The table showed that samplings who had population factor on different occupations had different satisfactions towards cultural tourism attraction place management at the statistic significance level .001. And, pair analyses by using the Sheffe's statistic test found that scholars and government officials had different satisfactions at the statistic significance level .021. Scholars and other occupations had a difference at the statistic significance level .019 as shown on the table 9.

Table 9

Comparison on occupation and satisfactions towards cultural tourism attraction place management classified a difference by per pair

(I) Occupation	(J) Occupation	Mean Difference (I-J)	Std. Error	Sig.
Scholar	Government official	.498*	.145	.021
	Business owner	.170	.175	.918
	Employee	.187	.172	.880
	Others	.533*	.154	.019
Government official	Scholar	-.498*	.145	.021
	Business owner	-.328	.189	.555
	Employee	-.311	.185	.588
	Others	.035	.169	1.000
Business owner	Scholar	-.170	.175	.918
	Government official	.328	.189	.555
	Employee	.017	.209	1.000
	Others	.363	.196	.488
Employee	Scholar	-.187	.172	.880
	Government official	.311	.185	.588
	Business owner	-.017	.209	1.000
	Others	.346	.192	.519
Others	Scholar	-.533*	.154	.019
	Government official	-.035	.169	1.000
	Business owner	-.363	.196	.488
	Employee	-.346	.192	.519

Table 7

Comparison on decision making to revisit a place and satisfactions towards cultural tourism attraction place management

Decision making to revisit a place				t	P-value
Yes		No			
Amount	Mean	Amount	Mean	-1.675	.095
108	2.73	292	2.93		

The table showed that samplings who had different decisions to revisit the temple did not have different satisfactions towards cultural tourism attraction place management at the statistical significance level .05.

Result discussion

Most Chinese tourists were at aged 30-45 years old or working ages. They mostly graduated Bachelor Degree and interested to gain new experiences about tourism places, especially cultural tourism attraction places such as temples and palaces. This statement is relevant to the research of Watsamon Chantadit that different age, educational level, occupation, salary, and marital status influenced the different overall satisfactions towards tourism places and services provided by government agencies, shops (food and beverage) at the statistical significance level .05 [6]. In terms of their perceptions on values of cultural tourism resources, also influenced the increase of effectiveness of cultural tourism management. This statement is relevant to the research of Danusorn Aransukhon that the hypothesis found that perceptions on values of logos in each perspective influenced different loyalty to logos and attitudes. Perceptions on values of logos and quality influenced the most [2].

CONCLUSION AND FUTURE WORK

Conclusion

Samplings of this research were females (219 persons; 54.8%) more than males. Samplings mostly aged between 30-45 years old (214 persons; 53.5%). For the educational level, most samplings graduated the Bachelor Degree (203 persons; 50.7%). In terms of occupation, mostly were scholars (138 persons; 34.5%).

Age difference influenced samplings' different satisfactions at the statistical significance level .000. And, pair analysis by using the Sheffe's statistic test found a comparison between age lower than 30 years and aged range 30-45 years old had different satisfactions at the statistical significance level at .001.

Samplings with population factor on different educational levels had different satisfactions towards cultural tourism attraction place management at the statistical significance level .003. And, pair analysis by using the Sheffe's statistic test found different satisfactions between samplings with Bachelor Degree and higher than Bachelor degree at the statistical significance level .004.

Samplings with population factor on different occupations had different satisfactions towards cultural tourism attraction place management at the statistical significance level .001. And, pair analysis by using the Sheffe's statistic test found scholars and government officials had different satisfactions at the statistical significance level .021. Scholars and other occupations had different satisfactions at the statistical significance level .019.

Chinese tourists perceived values of cultural tourism resources at the moderate or medium level. When consider at each point found that points with the three most scores were on 1) the temple you visit now is valuable to be preserved for younger generations, 2) overall, this temple is appropriate to be cultural tourism resource of Thailand whereas is a source of knowledge that reflects ways of life in the past, and 3) a temple that you visit now is valuable for beliefs and faith.

Recommendations

In order to increase effectiveness of cultural tourism management, there are two recommendations.

1. Stakeholders of various cultural tourism attraction places should promote, manage, and interpret meanings of cultural tourism to their tourists so that they can perceive values of cultural tourism resources. They also may realise and are aware of cultural tourism resource preservation.

2. Stakeholders should also increase various tourism activities. The activities help increase knowledge of tourists about cultural tourism resources, which support sustainable tourism attraction place management.

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PRODUCT DEVELOPMENT OF MACARON WITH WILD ALMOND POWDER SUBSTITUTE FOR ALMOND POWDER

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ABSTRACT

In this study, the almond powder was replaced with wild almond powder in the macaron. The purposes of this study were to study the standard recipes of the macaron with wild almond powder substituted for almond powder, to study the nutritional values of macaron and the production cost of the standard recipes of the macaron with wild almond powder and the recipes. The results showed that the sensory quality evaluation of the third recipe was significantly different in the aspects of an appearance, which had average score of 7.42, it was moderate level.

Therefore, the third recipe was used to study the 3 different ratios of wild almond powder to almond powder which were 5:95, 10:90 and 15:85, respectively; the results showed that the appearance's aspects of the third recipe; the testers scored the preference of the 3rd recipes in the low level, which have average score of 6.28, the texture's aspect significantly differed at the 95% confidence level.

The nutritional values of the third recipe in making macaron with wild almond powder substituted for almond powder in one serving of 35 grams; the result showed that the total energy was 170 kcal, the fat content was 11 percent, the saturated fat was 1.5 grams, the calcium percentage was 2 and less than 2% of iron.

Keywords: Macaron, Wild almond Powder, Almond Powder

INTRODUCTION

Nowadays, the consumption of human food has changed. It is caused by the hasty time each day, economic conditions, or values changed. Nowadays, Thai people have adopted Western culture in everyday life. One of the cultures is food culture. Bakery Market is worth approximately 15,000-17,000 million baht from the rush of consumer behavior in the city and need comfort. And the market has a lot more growth potential (Apichart Thammanoomai, 2015) [1]. There are many types of popular foods, such as, bakery products, cookies, bread cakes, etc.

Thailand produces over 176,000 tonnes of bakery and the bakery market is growing; it has increased there are likely to be new modern products and well-added ingredients with health, this in order to attract more attention to the consumer (Pravet Vut-Raiva, 2016) [2]. Macaron originated in France baked in a kind of cookie flat dome (Pattira Rattanadilok Na Phuket and Buppha Kittikul, 2016) [3]. Macaron's taste is soft, sweet and colorful; the macaron's texture is crisp outside and inside is soft, in the middle macaron have crumb called Ganache. The main ingredient of the macaron is almond powder, sugar, icing sugar, egg white and water (Sophon Somprasong Budein, 2014) [4]. Macaron is made as a dessert or a snack, which is more popular, and it is sold worldwide. This has a direct impact on the behavior of the population, especially breakfast. This is the growth channel of the bakery market. (Tidarat Sanphom, 2016) [5]

Wild Almond has the scientific name as *Irvingia malayana Oliv.exA.Benn*, or called Thai's almonds. A perennial plant is medium to large, a deciduous tree, the height of the wild almond tree is about 10-30 meters, grows well in all types of soil; it need moderate water and humidity; it could grow in all areas of Thailand such as the dry evergreen forests, beach forest, mixed deciduous forest, grass and red forest. Young wild almond is green when it turns longer becoming yellow and hard-shell grain. The inside kernel is white; it is characterized as flour with oil, usually fructify between February to April. The inside kernel of wild almond per 100 grams contains 66.78% fat, 3.40% protein, 9.07% carbohydrate, 2.08% carbohydrate, 103.30 mg calcium, iron 61.43 mg. (Podjane Boonna, Sunee Sahad-pho, Wasana Kuawkern and Sumpa Therd-Kwanchai. , 2014) [6]. Properties used to nourish the kidneys, marrow, ligament and reduce parasite in the stomach, etc., it is not commonly used to turn the wild almond grain into food but it will be eaten regularly.

Therefore, the researcher used macaron, which is a popular dessert now; prices are quite high. The original recipes of the macaron will be used almond powder. The researchers uses wild almond powder to replace almond powder to increase the nutrition value of agricultural products, enhances the nutritional value, reduce cost of production. It is also a new way for consumers; this is done to increase the value of local products and add nutritional value to your diet.

METHODOLOGY

1. Study the standard recipe of the macaron making process.

Studied the 3 standard recipes were used; the experimental design was randomized complete block design (RCBD). The experimental study used 50 peoples who were teachers and students at Suan Sunandha Rajabhat University, then used to evaluate the characteristics of the aspects, such as appearance, color, odor, taste, texture and overall preference. The recipe was taken to test the sensory quality by the test method of rating preference used 9 – Point Hedonic scale, analysis of variance used the computer program to calculate the statistical values, and compared the difference between the average by Duncan’s New Multiple Range Test method at the 95% confidence level.

2. Study on the appropriate ratio of wild almond powder substituted for almond powder in the macaron.

Studied the ratios of wild almond powder to almond powder, which using the accepted standard recipes with the study on the 3 different ratios of wild almond powder to almond powder, which were 5:95, 10:90 and 15:85, respectively. The experimental study used testers to evaluate the sensory quality by using 50 testers who were teachers and students at Suan Sunandha Rajabhat University. Sensory quality evaluation by the test method of rating preference used 9 – point Hedonic Scale to assess the aspects of the appearance, color, odor, taste, texture and overall preference. Sensory quality evaluation on appearance, color, odor, taste, texture and overall preference by the 9-point Hedonic Scale, analysis of variance (ANOVA) used the computer program to calculate the statistical value, and compared the difference between the averages by Duncan’s New Multiple Range Test method at the 95% confidence level.

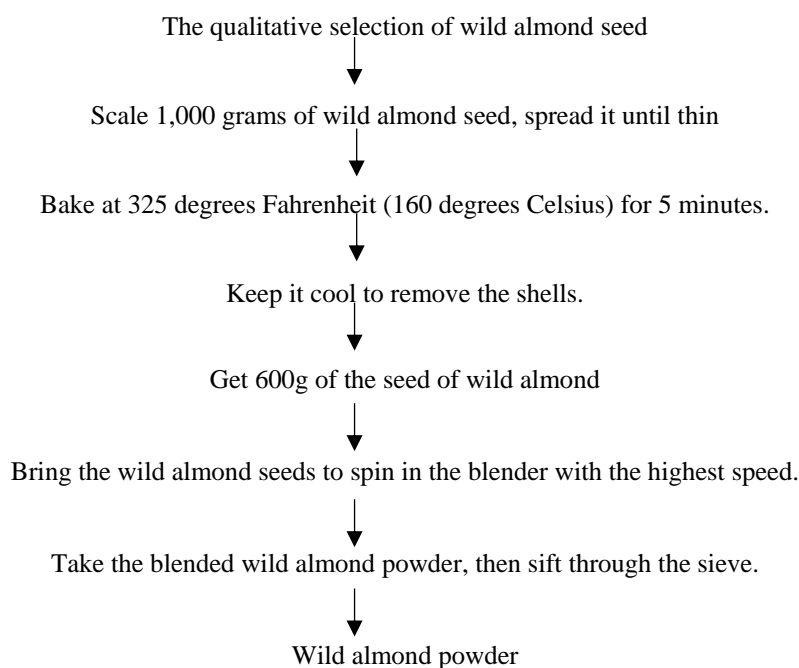


Figure 1. The preparation process of wild almond powder
Source: adapted from Podjane Boonna et al., (2014) [7].

3. Study the nutritional values of the macaron with wild almond powder substituted for almond powder.

Brought the selected macaron, powdered wild almond substituted for almond powder to analyze the nutritional values according to the method of AOAC (2016) [8]:

1. Total energy (kcal)
2. Energy from fat (kcal)
3. Carbohydrate
4. Protein
5. Total Fat
6. Saturated Fat
7. Cholesterol
8. Fiber
9. All sugar
10. Vitamin A
11. Vitamin B1
12. Vitamin B2
13. Sodium
14. Calcium
15. Iron

RESULTS

1. The results of standard recipe of Macaron.

The results of sensory quality evaluation of the three standard recipes to develop the macaron with wild almond powder substituted for almond powder the making process of the macaron adapted from Jade-nipat Boonyasawat and Chakravut Poomsem (2013) [9] as shown in Table 1

Table 1

The results of sensory quality evaluation of the three standard recipes of the macaron.

Sensory Characteristic	Standard Recipe		
	1	2	3
Appearance	6.80±1.12 ^b	6.90±1.56 ^{ab}	7.42±1.26 ^a
Color ^{ns}	6.46±1.46	6.94±1.36	7.00±1.28
Odor ^{ns}	6.16±1.31	6.66±1.30	6.22±1.30
Taste ^{ns}	6.84±1.39	6.58±1.83	6.66±1.64
Texture ^{ns}	6.00±1.86	6.16±1.83	6.34±1.87
Overall ^{ns}	6.66±1.39	6.82±1.59	6.92±1.55

Notes; letters that are different in the horizontal indicate the distinct average were statistically significant at 95% confidence level.

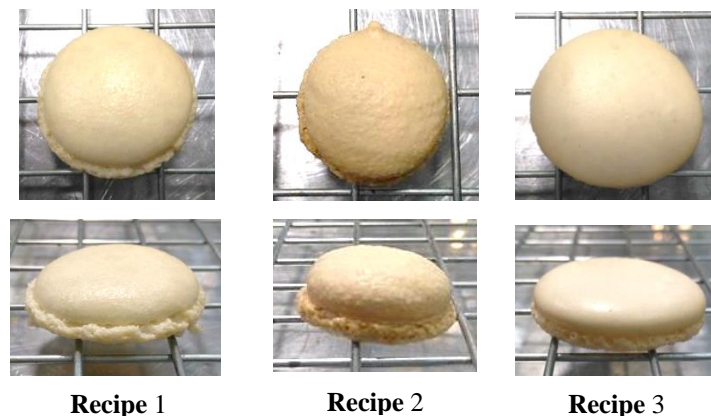
Mean ± standard deviation

^{a,b,c...} Means with the different letters are significantly different ($p \leq 0.05$).

^{ns} Means are not significantly different ($p > 0.05$).

Figure 2

Characteristic of standard recipes.



Source: Recipe 1 Jer-Hard Jae-Kerb. (2012) [10], Recipe 2 Yohan Mathee. (2012) [11] and Recipe 3 Nantawat Nantanet. (2012) [12]

From Table 1, it found that the sensory quality evaluation of the macaron's standard recipe and the acceptance test of the 9-point Hedonic scale were evaluated by the university students amounting to 50 people in Suan Sunandha Rajabhat University. The results of the sensory quality evaluation found that the aspect of appearance were significantly different at the 95% confidence level. Comparison on the appearance's aspects of the three standard recipes; the testers scored the preference of the third recipes in the moderate level, which had average score of 7.42, 6.90 and 6.80, respectively. The third recipes got the score of the preference higher than the first and the second recipes tested by the tester, because of the fact that the good nature of the way to look at the top is a circle, skin on top of a macaron is smooth from the resolution of the crushed almonds. Foot or Skirt is a scuffle like a lace thin skirt. Moreover, the procedure of making the third recipes is different from the first and the second recipes. The third recipes will bring almond powder and icing sugar to a fine blender for 4 minutes before it is made in next step; then the almond powder will have a finer resolution than the first and the second recipes glided alone. Therefore, the experimenter choose the third recipes which is the basis for studying the amount of wild almond powder to partially substituted for almond powder in the production process of the macaron.

2. The results of study the appropriate ratio of wild almond powder partially substituted for almond powder in making the macaron.

The results of sensory quality evaluation were to study the appropriate ratio of wild almond powder substituted for almond powder in making macaron as shown in Table 2.

Table 2

The results of sensory quality assessment were to study the appropriate ratio of wild almond powder substituted for almond powder in making macaron.

Sensory Characteristic	Recipe		
	Recipe1 (5:95)	Recipe2 (10:90)	Recipe3 (15:85)
Appearance	6.84±1.23	7.14±1.44	7.10±1.27
Color ^{ns}	6.90±1.73	7.18±1.66	7.18±1.64
Odor ^{ns}	6.68±1.46	6.60±1.51	6.84±1.56
Taste ^{ns}	6.36±1.56	6.88±1.35	6.80±1.43
Texture ^{ns}	5.32±1.89 ^b	5.76±2.06 ^{ab}	6.28±1.86 ^a
Overall ^{ns}	6.72±1.12	6.90±1.15	7.10±1.56

Notes; letters that are different in the horizontal indicate the distinct average were statistically significant at 95% confidence level. Mean ± standard deviation

^{a,b,c...} Means with the different letters are significantly different ($p \leq 0.05$).

^{ns} Means are not significantly different ($p > 0.05$).

Figure 3

Characteristic of appropriate ratio of wild almond powder substituted for almond powder in making macaron at 5:95, 10:90, 15:85



From Table 2, it found that the sensory quality evaluation of the Macaron's standard recipes with the study on the 3 different ratios of wild almond powder to almond powder, were 5:95, 10:90 and 15:85, respectively. The acceptance test of the 9-point Hedonic scale were evaluated by the university students amounting to 50 people in Suan Sunandha Rajabhat University. The results of the sensory quality evaluation showed that the texture's aspect significantly differed at the 95% confidence level. When comparing the appearance's aspects of the three recipes, the testers scored the preference of the third recipe in the low level, which had average scores of 6.28, 5.76 and 5.32, respectively. The third recipes got score higher than the first and the second recipes tested by the tester, The 2nd and 3rd recipe were rated at a moderate level by the tester due to the fact that the third recipe had the highest dose of wild almond powder; the time to eat was crisp; it had clear odor, as a result, the testers scored better on the aspect of the texture than other recipes. But if the maker wants to put more wild almond powder than the 3rd recipes defined will result in the upset of the condition. Because wild almond is a legume; the amount of fat is quite high, and there are other similar nutrients. But wild almond are valuable nutrients, which there are different from almonds are calcium and iron, so the experimenter choose the third recipes that are used to check the nutritional values.

3. The results of study the nutritional values of the macaron with wild almond powder substituted for almond powder.

The results of the sensory quality evaluation were to study the nutritional values of the macaron with wild almond powder substituted for almond powder as shown in Table 3

Table 3

The nutritional values of the macaron with wild almond powder substituted for almond powder.

Nutrition Values	Quantity/Day
Total Energy (kcal)	170
Protein (gram)	4
Total Fat (gram)	11
Saturated Fat (gram)	1.5
Calcium (gram)	2
Iron (gram)	>2

Table 3 showed that the nutritional values of the third recipes in making macaron with wild almond powder substituted for almond powder (15:85). The total energy was 170 kcal, the fat content was 11 percent, the saturated fat was 1.5 grams, the calcium percentage 2 and less than 2% of iron, all of which are in one serving per day, one serving of 7 grams (35 grams) per box per day and per person.

The nutrition label obtained from the macaron with wild almond powder substituted for almond powder. The results were shown in Table 4

Table 4

Nutrition label obtained from the macaron with wild almond powder substituted for almond powder.

Nutrients			
One serving: 7 pieces (35 g)			
Unit consumption per carton: 1			
Nutritional value per serving			
Total energy of 170 kcal (60 kcal energy)			
		Percentage of recommended doses per day*	
Total Fat 7 g.		11%	
Saturated Fat 1.5 g.		8%	
Cholesterol 0 mg.		0%	
Protein 4 g.		8%	
Total Carbohydrate 24 g.		8%	
Fiber 2 g.		1%	
Sugar 21 g.			
Sodium 15 mg.			
		Percentage of recommended doses per day*	
Vitamin A	0%	Vitamin B1	0%
Vitamin B2	0%	Calcium	2%
Iron less than 2%			

* Percentage of recommended nutrients per day for Thai people aged 6 years and over (Thai RDI) based on energy requirement of 2,000 kcal per day.

Individual energy needs are vary, those who need energy 2,000 kcal per day should receive the following nutrients:

Total Fat	less than 65 g.
Saturated Fat	less than 20 g.
Cholesterol	less than 300 mg.
Total Carbohydrate	300 g.
Fiber	25 g.
Sodium	less than 2400 mg.

Energy(kcal) per gram: Fat= 9; Protein= 4; Carbohydrate= 4

CONCLUSION AND FUTURE WORK

1. The study results of the standard recipes for making macaron from wild almond powder.

The standard recipes of all three recipes are studied, and used as a standard recipe in the development of the macaron from wild almond powder substituted for almond powder. This study show that the appropriate

recipe for product development chosen is the 3rd recipe, including 55 grams of Egg whites (1), 55 grams of egg whites (2), 150 grams of sugar, 35 grams of water, 150 grams of icing sugar, and 150 g of almond powder.

2. The study results of the ratio of wild almond powder to almond powder in macaron.

The results of the sensory quality assessment are to study of the ratio of wild almond powder to almond powder in macaron, show that the ratio of the ratio of wild almond powder to almond powder at 15:85, which has higher score of preference than the ratio of 5:95 and 10: 90 with a slighter score of preference because of an increase in the powder dose of wild almond, this causes the texture is crisp and it has clear odor.

3. The study results of the macaron's nutritional values with wild almond powder substituted for almond powder.

The study results of the nutritional value of the macaron with wild almond powder substituted for almond powder; it show that the macaron with wild almond powder substituted for almond powder tested for the ratio of wild almond powder to almond powder at the ratio of 15:85; provides nutritional value as follows: Total carbohydrate is 170 kcal / day, Carbohydrate is 0%, Total fat is 11%, Saturated fat is 1.5 g / day, Calcium is 2%, and Iron is 2%, all in one serving per day; one serving of 7 grams (35 grams) per box per day and per person.

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EFFECT OF GLUCOMANNAN ON QUALITY OF PURPLE SWEET POTATO MILK PASTEURIZED

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ABSTRACT

This research aimed to study the effects of glucomannan on the quality of the pasteurized purple sweet potato milk. The ratio of the purple sweet potato oil to milk was 50:50, 45:55 and 40:60), then LTLT pasteurization process (Low Temperature Long Time) heated at 63 deg C for 30 minutes. It found that the ratio of the purple sweet potato oil to milk was 40:60, which was the appropriate ratio because the purple sweet potato was the main plant with starch and unique flavor when added in large amount, thus affecting the taste of the tester.

At the varying the glucomannan quantity at the percentage of 0.20, 0.25 and 0.30 in all ingredients, the results showed that when the amount of glucomannan was increased, the value of L* (brightness) and precipitation decreased a* (red value) and viscosity increased, but it did not affect b* (blue value) because glucomannan had fiber properties when dissolved in water and fully diluted, cover the sludge with no sedimentation. The precipitate separation caused the pasteurized purple sweet potato milk with varying the volume at 0.30% of all ingredients was the optimum amount, this resulted in homogeneous milk. The shelf life of the pasteurized purple sweet potato milk was kept at 4 deg C for 7 days without Escherichia coli, but Staphylococcus aureus was found to be less than 1 CFU / ml. The nutritional values of protein, ash, fat, moisture and carbohydrate were 1.71, 0.51, 2.24, 83.91 and 11.63 g / 100 mg, respectively, with anthocyanin content of 0.91 g / 100 milligrams.

Keywords: Pasteurized, Milk, Purple sweet potato, Glucomannan

INTRODUCTION

The pasteurized milk products are products that have been treated with heat treatment to maintain their nutritional value. It is better to adopt a sterilization process because the sterilization process loses its nutritional value and destroys the protein structure. The average price is around 10-91 baht to drink as a supplement. The nutritional value of milk is about 3.4 percent protein, which is essential for the body (Essential amino acid), such as leucine, valine, arginine, methionine, and isoleucine etc., (Suree Taew-Tcing, 2009) [1].

Glucomannan is a stabilizer that is added to the food to increase concentration and help to prevent protein precipitation; it found in the tin; it is a natural substance that is safe for consumers and is a stabilizer that is commonly used in the industry. Glucomannan has a high molecular weight; the ability to absorb water is very good; it is the most viscous foods in the diet. It can be used in a variety of food products such as sauces, dressings, soups, dairy products, and gravy etc., (Saysamorn Phoonphun, 2004) [2].

Purple sweet potato is a plant found in Thailand, grows well in the tropics and can be harvested within 5-6 months, especially in the eastern part of Thailand. The purple sweet potato varieties grown in Thailand have many species such as Negro, species 106-35, species 188-1 and species 188-2. The purple sweet potato has the color in the Anthocyanin, which anthocyanin is natural, non-toxic and soluble substances; anthocyanin has orange, red, purple and blue. Anthocyanin in purple sweet potato has a biological function, which results in the absorption of free radicals (Scavenging free radicals), inhalation of carcinogen, and reduces high blood pressure (Yanil Chainarong, Kulraya Limrungrat, and Arnocha Suksomboon, (2014) [3]. Thus, the purple sweet potato has been further developed by the government and is promoted its growth broad spread. However, purple sweet potato is simple to be a rotten plant; it is short harvest. Therefore, they are interested in processing products (Kim et al., 2012). [4]

Therefore, this research aims to study the effect of glucomannan quantities to improve the quality of the pasteurized purple sweet potato by reducing sedimentation in milk. It also boosts the nutritional value of the pasteurized milk products and suitable for consumers of all ages.

OBJECTIVE

1. Study the appropriate ratio of the purple sweet potato oil to milk for the production of the pasteurized purple sweet potato milk.
2. Study the amount of glucomannan on the quality of the pasteurized purple sweet potato milk.
3. Study the shelf life of the pasteurized purple sweet potato milk.
4. Study the nutritional values of the pasteurized purple sweet potato milk.

METHODOLOGY

1. Study the appropriate ratio of the purple sweet potato oil to milk in the production of the pasteurized purple sweet potato milk.

1.1 The preparation of the purple sweet potato oil

Bring fresh purple sweet potatoes to clean, peel and rinse again and then cut into small pieces, boil to 100 degrees Celsius until cooked, then bring the purple sweet potato to be thoroughly blended, mix 500 g of purple sweet potato with 500 ml of water and allow to cool. Then filter with a little white cloth, as result in got a purple oil, as shown in Appendix D. 1, adapted from the Thai Traditional Medicine Institute, Department of Medicine, Ministry of Public Health (2013)[5].

1.2 The production of the pasteurized purple sweet potato milk

The purple sweet potato oil obtained from 3.1.1 mixed with milk. The ratio of the purple sweet potato oil to milk were 50:50, 45:55 and 40:60, as shown in Table 3.1 and pasteurized by LTLT (low heat treatment). Temperature-Long Time heated to 63 ° C for 30 minutes and then cooled down to 4 ° C. Sensory quality evaluation by the method of 9-point Hedonic scale, used testers who were not trained 50 people evaluate the sensory qualities in aspects of appearance, color, flavor and overall preference; the experimental design was Randomized Complete Block Design (RCBD), used analysis of variance (ANOVA) at 95% confidence level and Duncan's New Multiple Range Test (DMRT) were tested with 50 non-trained consumers. From Table 1

Table 1

The quantity of the raw materials used to study the appropriate ratio of the sweet potato purple oil to milk for the pasteurized purple sweet potato milk production.

Raw Material (gram)	The ration of the purple sweet potato oil to Milk		
	50:50	45:55	40:60
Milk	235.00	258.50	282.00
Purple sweet potato oil	235.00	211.50	188.00
Refined Sugar	30.00	30.00	30.00
Total	500.00	500.00	500.00

Source: Adapted from the recipe of Saysamorn Phoonphun, (2004) [2].

2. Study the amount of glucomannan on the quality of the pasteurized purple sweet potato milk.

The ratio obtained from 3.4.1 was used to study the amount of glucomannan on the quality of the pasteurized purple sweet potato milk. The amount of glucomannan was divided into 3 levels of 0.20, 0.25 and 0.30 percent of total ingredients, and passed through LTLT pasteurization process heated at 63 deg C for 30 minutes and then cooled down to 4 deg C. The experimental design was completely randomized design (CRD), used analysis of variance (ANOVA) and compared the mean difference of Duncan's New Multiple Range Test at 95% confidence level. The qualitative selection by quality analysis as follows:

2.1 Color (L* a* and b*) analyzed with Chroma Meter (HunterLap model color flex E2) according the method of Chuchart Areejitranusorn (2001) [6].

2.2 Viscosity was analyzed by Brookfield Digital Viscometer according the method Chuchart Areejitranusorn (2001) [6].

2.3 The analysis of precipitation by UV / Visible-Spectrophotometry using 550 nm of wavelength according to Sasida Yu-Suk. (2006). [7]

3. Study the shelf-life of the pasteurized purple sweet potato milk.

The shelf-life of the pasteurized purple sweet potato milk was studied at 4 deg C for 7 days, sampled every day at 0, 3, 5 and 7 for the microbiological quality analysis.

3.1 Escherichia coli tested by MPN (MOST Probable Number according to the method of ISO 7251 (2005).[8]

3.2 *Staphylococcus aureus* tested by CFU (Colony Forming Unit) according to the method of FDA BAM, Online (2001) [9].

4. Study the nutritional value of the pasteurized purple sweet potato milk.

To analyze the nutritional values of the pasteurized purple sweet potato milk. as follows:

- 4.1 Protein (Protein) used the method of AOAC (2012) [10].
- 4.2 Ash (Ash) used the method of AOAC (2012)
- 4.3 Fat (Fat) used the method of AOAC (2012)
- 4.4 Moisture used the method of AOAC (2012)
- 4.5 Carbohydrate used the method of AOAC (2012)
- 4.6 Anthocyanin used the Da Costa's method (2000) [11].

RESULTS

Study the appropriate ratio of the purple sweet potato oil to milk for the production of the pasteurized purple sweet potato milk.

The results of the sensory quality evaluation were as follows: 50:50, 45:55 and 40:60, respectively, for the production of the pasteurized purple sweet potato milk. As shown in Table 4.1, it was found that the sensory characteristics in the aspect of color did not differ at the 95 percent confidence level. The aspects of appearance, odor, texture (viscosity), and overall preference, which oil ratio of purple sweet potato to milk was 45:55 and 40:60 with a score of preference more than the ratio of 50:50. In the aspect of taste, the ratio of purple sweet potato oil to milk was 40:60 with a score of preference more than the ration of 50:50 and 45:55 with a statistical significance of 95% confidence level. Therefore, when considering the taste score, the ratio of purple oil to milk was 40:60 was the optimal ratio, because purple sweet potato is a starchy plant with the main ingredient and has a unique flavor when added high volume, thereby affecting the taste of the testers. From Table 2.

Table 2

Sensory quality evaluation of the pasteurized purple sweet potato milk with different ratios of purple sweet potato oil per milk.

Sensory Characteristics	50:50	45:55	40:60
Appearance	6.90±1.40 ^b	7.84±1.03 ^a	7.42±1.16 ^a
Color ^{ns}	7.16±1.31	7.54±0.97	7.42±1.21
Odor	5.92±1.65 ^b	7.08±1.29 ^a	6.68±1.47 ^a
Taste	5.88±1.56 ^C	7.32±1.63 ^b	6.66±1.46 ^a
Texture(Viscosity)	6.32±1.42 ^b	7.10±1.32 ^a	6.92±1.19 ^a
Overall preference	6.46±1.21 ^b	7.60±1.27 ^a	7.20±1.15 ^a

Remark : Mean ± Standard Deviation

^{a,b,c...} Means with the different letters are significantly different ($p \leq 0.05$).

^{ns} Means are not significantly different ($p > 0.05$).

The study results of the glucomannan quantity on the quality of the pasteurized purple sweet potato milk

The results of the color's aspect for the pasteurized purple sweet potato milk with varying volume at the level of 0.20, 0.25 and 0.30 percent of total ingredients, when the amount of glucomannan was increased, the value of L * or brightness tend to decrease, the value of a* or red trend was likely to increase. It was found that the amount of glucomannan did not affect the value of b * or blue. Because the pasteurized purple sweet potato milk has a purple substance called Anthocyanin, so the product is purple. The test results were consistent with the precipitation and viscosity, as shown in Table 3 and Figure 1 it was found that the increased amount of glucomannan resulted in a decrease in precipitation, viscosity is increasing. Glucomannan has a fiber structure; when the water is dissolved, it swells to full and then encase the sediment of the pasteurized purple sweet potato to precipitate and separate layers. The solids contained in the purple sweet potato milk were suspended, which was consistent. From Table 3 and Figure 1

Table 3

The results of quality tests of sedimentation, viscosity and color varying the glucomannan quantity with 0.20, 0.25 and 0.30 percent of all ingredients, respectively.

The results of quality tests	Quantity of Glucomannan (Percentage)		
	0.20	0.25	0.30
L*	61.00±0.14 ^a	60.50±0.03 ^b	60.78±0.16 ^{ab}
a*	9.25±0.05 ^b	9.29±0.07 ^{ab}	9.43±0.00 ^a
b* ^{ns}	-13.30±0.09	-13.28±0.10	-13.08±0.07
Sedimentation	2.54±0.04 ^b	2.59±0.00 ^{ab}	2.62±0.00 ^a
Viscosity	78.15±0.63 ^c	95.35±0.63 ^b	142.00±1.41 ^a

Remark : L * represents darkness - brightness is from 0-100.

a * indicates red when positive (+) and green when negative (-)

b * indicates yellow when positive (+) and **blue when negative (-)**.

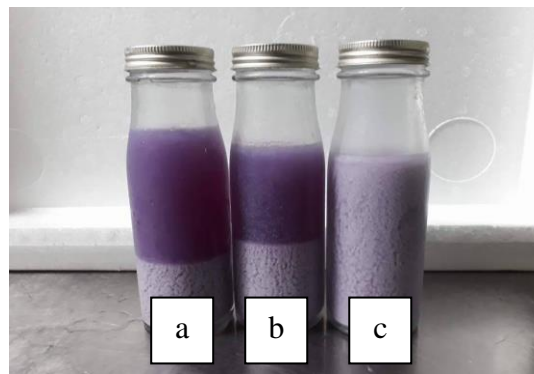
Mean ± Standard Deviation

^{a,b} Means with the different letters are significantly different ($p \leq 0.05$).

^{ns} Means are not significantly different ($p > 0.05$).

Figure 1

The pasteurized sweet potato milk with varying the amount of glucomannan at the percentage of 0.20 (a.), 0.25 (b.), and 0.30 (c.) of the total ingredients.



The analysis of the shelf-life of the pasteurized purple sweet potato milk.

The analytical results of the pasteurized purple sweet potato milk were maintained at 4 deg C for 7 days. Table 4.3 showed that Escherichia coli were not found. Staphylococcus aureus was found to be less than 1 CFU / ml according to the standard of dairy milk industry (TISI 738-2547) given that Escherichia coli must not be found in pasteurized milk. In the same study, Pongsak Suwannapol, Primпой Chaijaroen and Sakda Decharit (2015) [12]. studied the shelf-life of the germinated brown rice milk, storage at 4 ° C for 7 days showed total microorganisms and Escherichia coli were not found but still had a staphylococcus aureus at 150 CFU / ml on day 5, (standard of community product, 529/2558) 529/2558), including the research of Phak Malai Krishna-ShaLei, they study the effect of pasteurization on inhibitory activity. Staphylococcus aureus found that the pasteurization process increased the temperature, Staphylococcus aureus is reduced and will slowly decrease until the pasteurization process ends. It can be concluded that pasteurization can inhibit the production of Escherichia coli and Staphylococcus aureus in the pasteurized products. From Table 4

Table 4

The analysis of *Escherichia coli* and *Staphylococcus aureus* of the pasteurized purple sweet potato milk on storage at 4 °C for 7 days.

Microbial quality	Shelf life (days)			
	0	3	5	7
<i>Escherichia coli</i>	Not found	Not found	Not found	Not found
<i>Staphylococcus aureus</i>	< 1 CFU/ml	< 1 CFU/ml	< 1 CFU/ml	< 1 CFU/ml

The nutritional value of the pasteurized purple sweet potato milk

When analyzing the nutritional value of the pasteurized purple sweet potato milk found that protein, ash, fat, moisture and carbohydrate were 1.71, 0.51, 2.24, 83.91 and 11.63 grams respectively, anthocyanin was 0.91 grams per 100 milligrams, which is consistent with the research of Patthama Hirunyophat(2015) [13]. they found development of ready-to-eat purple sweet potato soup in retort pouches, which purple sweet potato has a source of anthocyanin with antioxidants. In addition, the nutritional value was in line with the research of Chompoonuch Phuenptopb and Bussara Soiraya (2012)[14].the nutritional values of milk drinks mixed with fruit juice found that protein, ash, fat, moisture and carbohydrates were 2.80, 0.80, 2.10, 85.50 and 8.80 respectively. From Table 5

From Table 5

The nutritional value of the pasteurized purple sweet potato milk 100 mg.

Nutrition Value	Quantity	Unit
Protein	1.71	gram
Ash	0.51	gram
Fat	2.24	gram
Moisture	83.91	gram
Carbohydrate	11.63	gram
Anthocyanin	0.91	miligram

CONCLUSION AND FUTURE WORK

The results of sensory quality evaluation of the purple sweet potato oil on milk are 50:50, 45:55 and 40:60. It found that the ratio of the purple sweet potato oil to milk is 40:60, which it is the appropriate ratio because the purple sweet potato is the main plant with starch and unique flavor when added in large amount, thus affecting the taste of the tester.

The study results of the glucomannan quantity on the quality of the pasteurized purple sweet potato milk quality varying the amount of glucomannan at the percentage of 0.20, 0.25 and 0.30, the study found that the glucomannan quantity increased results in a decrease in the values of L* and sedimentation, the value of a* and viscosity increase, but it does not affect the value of b*, since the glucomannan has fiber properties when dissolved in water and fully diluted, cover the sludge with no sedimentation.

The shelf-life of the pasteurized purple sweet potato milk is maintained at 4 deg C for 7 days without *Escherichia coli* and *Staphylococcus aureus*, which is less than 1 CFU / ml.

The analysis results of the nutritional values with the samples weighting 100 grams included protein, ash, fat, moisture, and carbohydrate are 1.71, 0.51, 2.24, 83.91 and 11.63 grams, respectively, with anthocyanin content of 0.91 grams

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DEVELOPMENT OF ICE CREAM FROM RICE MILK

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ABSTRACT

This research aimed to develop the product of rice milk ice cream, to study the standard recipe for the production of ice cream, to study on the amount of rice milk substitution in ice cream production, and to study the physical and nutritional properties of rice milk ice cream.

The standard ice cream consisted of 600 grams of fresh milk, 300 grams of whipped cream, 100 grams of sugar, 57 grams of yogurt, 3 grams of vanilla, 1 gram of salt and 65 grams of milk powder, then prepared the rice milk to replace it in ice cream at the ratio of 10, 30 and 50 percent of fresh milk. When applied to the sensory quality assessment, it found that the recipe that the replaced rice milk in the 30 percent ratio was scored in moderate level in the aspects of appearance, color, aroma, taste, texture and overall preference. At the physical quality test, it found that the milk substitutions at 30 percent had an overrun rate of 6.97 percent, and was tested for nutritional value in accordance with the nutrition labeling standard. Nutritional value for ice cream 100 grams, as follows: total energy 209.77 kcal, energy from fat 111.33 kcal, total fat 12.37 g, saturated fat 7.89 g, Cholesterol 109.48 mg, protein 4.76 g, carbohydrates 19.85 g, dietary fiber 0.64 g, sugar 17.56 g, sodium 48.09 g, vitamin A 108.90 microgram, vitamin B 1 less than 0.030 mg, 0.088 mg vitamin B2, calcium 97.02 mg, Iron 0.35 mg, 0.58 grams of ash and 62.44 grams of moisture.

Keywords: Ice cream, Rice milk and Thai rice

INTRODUCTION

Ice Cream is a popular dessert product worldwide with continuous development in the aspects of taste, odor and quality of ice cream; there are new and more varied adaptations to respond to more consumers based on market analysis due to the weather and the warmth of Thailand throughout the year (Jiraporn Weenuttranon and Tidarat Sanprom, 2017) [1]. On average 30-50% , an increase in sale of ice cream during summer sales are higher than normal; this is due to increased purchasing power, the continued economic growth of 300 baht, the policy of the pledge of agricultural crops, and also focus on an increased promotion activities according to the intensity of the competition in the ice cream industry. (Kasikorn Research Center, 2016) [2]. Ice cream is generally composed of milk, stabilizer, emulsifiers, flavoring agent, and other ingredients such as flour, food colors, etc., (Marshall and Arbuckle, 1996) [3].

Thai rice is a nutritious and nutritious cereal with essential nutrients, vitamins and minerals, such as carbohydrates, proteins, vitamins and nutritional benefits. Rice is the main food of the Thai people and the East for a long time before being widespread around the world. Thai rice has a variety of varieties and colors are different, including black, dark purple, ruby yellow, brown and white. Rice color provides different benefits and nutrients such as polyphenol, anthocyanin, vitamins, lutein, beta carotene, gamma oryzanol. These nutrients have direct antioxidant properties; antioxidants that cause cancer and many diseases such as coronary artery disease, cataracts, arthritis, etc; various consumption of rice variety on a regular basis is to help prevent disease. Especially, Thai native rice has dark color which has high antioxidant content such as red brown jasmine rice, purple rice, black jasmine rice, jasmine rice, riceberry rice, etc. In addition, the rice is also developed into many other processed products such as baked goods including beverages such as rice milk which is a product of a type of beverage derived from the processing of nutrients that are beneficial to the body as well as vitamins, carbohydrates, minerals and fiber. Rice is also a new alternative drink for consumers who cannot consume dairy products (Dairy and dairy products) because there is no lactose digestive enzyme or called as "lactose-intolerance" (Sustainable Agriculture Foundation, 2014) [4].

METHODOLOGY

1. Study the standard recipes of ice Cream

Selection of standard recipes and methods for making ice Cream; there were 3 recipes, sensory quality assessment by acceptance test method, used 9 – Point Hedonic scale to assess the appearance, color, odor, taste, texture and overall preference; the experimental study used testers who were not trained 50 peoples, the experimental design was Randomized Complete Block Design: RCBD, analysis of variance, and compared the difference between the average by Duncan's New Multiple Range Test method at the 95% confidence level.

2. Study the amount of the rice milk substitution with milk in the ratio of 10, 30 and 50 percent.

The process of rice milk production with the five types of rice are jasmine rice, riceberry rice, luem pua black sticky rice, red brown jasmine rice, and sangyod brown rice with 100 gram of each variety of rice, bring rice to clean with water and cook until cooked rice, then bring 500 grams of cooked rice spin with 2,500 grams of warm water, using a ratio of 1 part rice to 5 parts water, then take a cooked rice spin with water, filter with thin white fabric to remove the milk. Bring the rice milk into the pasteurized process at a temperature of 80 ° C for 2 minutes.

The standard recipes were used to determine the appropriate quantity of rice milk substitution for ice cream production. There were 3 different levels of 10, 30 and 50 percent of fresh milk. Used 9 – Point Hedonic scale to assess the appearance, color, odor, taste, texture and overall preference; the experimental study used testers who were not trained 50 peoples, the experimental design was Randomized Complete Block Design: RCBD, analysis of variance, and compared the difference between the average by Duncan's New Multiple Range Test method at the 95% confidence level

3. Study the chemical qualities.

Bring the ice cream accepted by consumers, to study the chemical composition based on a method of AOAC (2016) [5].

RESULTS

The results of Study the standard recipes of ice Cream.

The results of the sensory quality assessment of ice Cream found that appearance, odor, texture and overall preference, there were no statistically significant differences ($p > 0.05$). In the color and taste, there was a statistically significant difference ($p \leq 0.05$). The study of the overrun values of ice cream to determine the appropriate recipes considered the results of the tests were shown in Table 2. It found that the 2nd recipe was suitable to be used to produce ice cream from rice milk. This is consistent with the research conducted by Narin Thongsiri (1984) [6] found that the higher the overrun rate, the higher the production efficiency of ice cream production. Therefore, the 2nd recipes of ice cream have been selected as the standard recipes to be used in the production of rice milk ice cream.

Table 1
Sensory characteristics of standard recipe of ice Cream

Sensory Characteristics	Recipe 1	Recipe 2	Recipe 3
Appearance ^{ns}	7.16±0.96	7.00±1.21	7.00±1.45
Color	7.24±1.24 ^a	6.98±1.40 ^{ab}	6.62±1.31 ^b
Odor ^{ns}	6.64±1.59	6.82±1.53	6.30±1.53
Taste	7.42±1.31 ^a	6.98±1.62 ^{ab}	6.62±1.71 ^b
Texture ^{ns}	6.82±1.38	6.80±1.41	6.70±1.69
Overall preference ^{ns}	7.36±1.29	7.02±1.46	6.90±1.46

Remark : Mean ± Standard Deviation

^{a,b,c...} Means with the different letters are significantly different ($p \leq 0.05$).

^{ns} Means are not significantly different ($p > 0.05$).

Table 2
The average overrun of the standard recipes of ice cream, 3 recipes

Standard Recipe	Overrun (Percentage)
1	5.24 ± 0.90
2	6.50 ± 0.56
3	4.83 ± 0.17

Figure 1
The standard recipes of ice cream, 3 recipes



The results of study the amount of the rice milk substitution with milk in the ratio of 10, 30 and 50 percent.

The results of the sensory quality evaluation of the substitution of rice milk in the standard recipes of ice cream at 10, 30 and 50 percent of fresh milk, the result showed that all aspects significantly differed in the statistics ($p > 0.05$). It found that the substitution of rice milk at the ratio of 10 percent and 30 percent had the appearance, color, taste, texture and overall preference; there was no difference in the acceptability score than the substitution of rice milk at the rate of 50 percent. The study was conducted on the overrun values as shown in Table 4, it found that the substitution of rice milk at a ratio of 30 percent had the best overrun value.

Therefore, the study of the substitution of rice milk in the standard recipes of the ice cream production at the ratio of 10, 30 and 50 percent of fresh milk, the best alternative was the 30 percent of fresh milk to test the nutrition values.

Table 3
Sensory characteristics of the amount of the rice milk substitution with milk in the ratio of 10, 30 and 50 percent.

Sensory Characteristics	Quantity of rice milk substitution in ice cream (percent of fresh milk)		
	10 percent	30 percent	50 percent
Appearance	7.32 ± 1.10 ^b	7.32 ± 1.02 ^b	6.62 ± 1.43 ^a
Color	7.48 ± 1.23 ^b	7.36 ± 1.17 ^b	6.58 ± 1.61 ^a
Odor	7.54 ± 1.25 ^b	6.60 ± 1.62 ^a	6.38 ± 1.43 ^a
Taste	7.94 ± 1.17 ^b	7.60 ± 1.55 ^b	6.88 ± 1.85 ^a
Texture	7.14 ± 1.40 ^{ab}	7.50 ± 1.42 ^b	6.78 ± 1.40 ^a
Overall preference	7.82 ± 0.91 ^b	7.68 ± 1.08 ^b	7.02 ± 1.57 ^a

Remark : Mean ± Standard Deviation

^{a,b,c...} Means with the different letters are significantly different ($p \leq 0.05$).

^{ns} Means are not significantly different ($p > 0.05$).

Table 4

The average overrun of the rice milk ice cream

Quantity of Rice Milk (Percentage)	Overrun (Percentage)
10	4.16 ± 2.99
30	6.79 ± 2.34
50	6.98 ± 0.33

Figure 2

The Ice cream substituted by rice milk

**10 Percent****30 Percent****50 Percent*****The results of Study the chemical qualities of Ice cream***

The results of the nutritional values were available in the rice milk ice cream following the standard nutrition label as shown in Table 5.

Table 5

The average overrun of the rice milk ice cream

Chemical Composition	Quantity per 100 gram	Unit
Total energy (kcal)	209.77	kcal
Energy from fat	111.33	kcal
Total Fat	12.37	gram
Saturated fat	7.89	gram
Cholesterol	109.48	miligram
Protein	4.76	gram
Carbohydrate	19.85	gram
Fiber	0.64	gram
Sugar	17.56	gram
Sodium	48.09	miligram
Vitamin A	108.90	microgram
Vitamin B 1	Less than 0.030	miligram
Vitamin B 2	0.088	miligram
Calcium	97.02	miligram
Iron	0.35	miligram
Ash	0.58	gram
Moisture	62.44	gram

Note: Analysis value by company "Central Laboratory (Thailand) and Institute of Nutrition".

CONCLUSION

The results of the sensory quality assessment of the standard ice cream found that the 2nd recipe of ice cream have been selected as the standard recipes to be used in the production of rice milk ice cream. The

standard ice cream consisted of 600 grams of fresh milk, 300 grams of whipped cream, 100 grams of sugar, 57 grams of yogurt, 3 grams of vanilla, 1 gram of salt and 65 grams of milk powder.

The study of the substitution of rice milk in the standard recipes of the ice cream production at the ratio of 10, 30 and 50 percent of fresh milk, the best alternative was the 30 percent of fresh milk to test the nutrition values.

Study the chemical quality the rice milk ice cream in ratio of 30 percent had nutritional value for ice cream 100 grams, as follows: total energy 209.77 kcal, energy from fat 111.33 kcal, total fat 12.37 g, saturated fat 7.89 g, Cholesterol 109.48 mg, protein 4.76 g, carbohydrates 19.85 g, dietary fiber 0.64 g, sugar 17.56 g, sodium 48.09 g, vitamin A 108.90 microgram, vitamin B 1 less than 0.030 mg, 0.088 mg vitamin B2, calcium 97.02 mg, Iron 0.35 mg, 0.58 grams of ash and 62.44 grams of moisture.

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AN ANALYSIS OF THE LOCATIONAL PATTERN OF HOSPITALS IN THAILAND

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ABSTRACT

In medical geography, the locational pattern of hospitals plays an important role in health care of population. This is because there is *inequity* in the distribution of these resources^[1]. The geography of health care embraces two broad areas of study: the spatial properties of health care resources and the accessibility, utilization, and planning of health care services^[2]. As the foundation of people's health and life safety, hospitals are the most important health care resources as a public service facility. Their spatial allocation rationality guarantees an equal opportunity for people to have necessary medical treatments^[3]. However, people who live in large cities can access to hospitals more easily than people living in small cities. Likewise, urban population tends to be able to have more health services facilities than rural population. The *inequity* in the distribution of the resources, as well as low accessibility becomes an obstacle for populations to get health-care services from hospitals, especially high quality hospitals. Based on location theory, people will travel to get services at a place that is located close to them according to the principle of minimum amount of effort^[4, 5]. In both Western and non-Western countries, more health service facilities and higher personnel-to-population ratios are associated with higher levels of urbanization or population concentration^[6]. The purposes of this study are to analyze the locational pattern of hospitals and examine the factors influencing the locational pattern of hospitals in Thailand. The study area as a spatial framework is seventy-seven provinces located in six geographical regions of Thailand. The provinces are the spatial units. For methodology, the data used are the secondary data collected from Local Directory Year2012^[7]. The quantitative and statistical techniques used to analyze are mean (\bar{X}), density index, rank, percentage, correlation analysis and multiple regression analysis. For analyzing the locational pattern of hospitals, the cartographic technique is applied. The research findings are that the province whose hospitals was located the most was Bangkok (13.03%), followed by Chonburee Province (3.75 %) and Chiangmai Province (2.81%) as the second rank and the third rank, respectively. With regard to the locational pattern of hospitals in Thailand, it is found that two provinces whose hospitals were located at the highest level were Bangkok (13.03%) and Chonburee Province (3.75 %) (Map2). Only one province whose hospitals were located at the high level was Chiangmai Province (2.81%). Ten provinces whose hospitals were located at the moderate level were Nakornsawon, Udonrtanee, Kongan, Nakornratchaseema, Bureerum, Ubonratchatane, Samootpragarn, Surattanee, Nakornseetummarat and Songkla. There were thirty-five and twenty-nine provinces whose hospitals were located at the low level and the lowest level, respectively. In terms of analyzing the locational pattern by geographical region, it is found that the region which most contained hospitals was the Central Region (12.38%). The Northeast Region (12.38 %) and the South Region (12.38 %) ranked the second and the third, respectively. With respect to analyzing correlation analysis, it is found that the locational pattern of hospitals was significantly positively correlated with the population size factor ($r = 0.910$) and the density factor ($r = 0.805$) at $\alpha = .05$, respectively. This indicates that when the population increases, the hospitals will also increase. On the contrary, if the population decreases, the hospitals will also decrease. For analyzing the multiple regression analysis, it is found that the population size factor ($\beta = 0.630$) had the most important factor influencing the locational pattern of hospitals in Thailand, followed by the density factor ($\beta = 0.388$), respectively. These two factors explained the variation of the locational pattern of hospitals in Thailand by 89.20 % ($R^2 = 0.892$).

The regression model was: $\hat{Y} = -.721 + 1.526E - 5Pop + .015Den$

Key Words: Location of hospitals, Locational pattern, Geographical region

INTRODUCTION

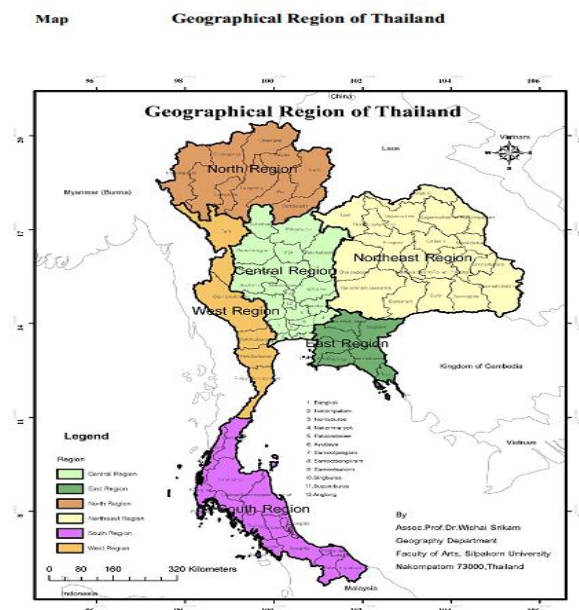
In medical geography, the locational pattern of hospitals plays an important role in health care of population. This is because there is *inequity* in the distribution of these resources^[8]. The geography of health care embraces two broad areas of study: the spatial properties of health care resources and the accessibility, utilization, and planning of health care services^[9]. As the foundation of people's health and life safety, hospitals are the most important health care resources as a public service facility. Their spatial allocation rationality

guarantees an equal opportunity for people to have necessary medical treatments^[10]. However, people who live in large cities can access to hospitals more easily than people living in small cities. Likewise, urban population tends to be able to have more health services facilities than rural population because the hospitals are located close to them while rural population lives in remote areas where hospitals are few and poor. The low accessibility becomes an obstacle for the rural population to get health-care services from hospitals, especially high quality hospitals. The *inequity* in the distribution of the resources, as well as low accessibility becomes an obstacle for populations to get health-care services from hospitals, especially high quality hospitals. Based on location theory, people will travel to get services at a place that is located close to them according to the principle of minimum amount of effort. Hence, hospitals will be located at a central place whose prime function is the provision of a wide range of goods and services to a dispersed population around it^[11]. In both Western and non-Western countries, more health service facilities and higher personnel-to-population ratios are associated with higher levels of urbanization or population concentration^[12]. The purposes of this study are to analyze the locational pattern of hospitals and examine the factors influencing the locational pattern of hospitals in Thailand.

THE STUDY AREA

The study area as a spatial framework is seventy-seven provinces located in six geographical regions of Thailand, nine provinces in the North Region, twenty provinces in the Northeast Region, seven provinces in the East Region, twenty-two provinces in the Central Region, five provinces in the West Region, and four-teen provinces in the South Region. The provinces are the spatial units.

Figure 1.
Map 1



THE METHODOLOGY

For methodology, the data used are the secondary data collected from Local Directory Year2012^[13]. The quantitative and statistical techniques used to analyze are mean (\bar{X}), density index, rank, percentage, correlation analysis and multiple regression analysis. For analyzing the locational pattern of hospitals, the cartographic technique is applied.

THE RESEARCH FINDINGS

The research findings are that the province whose hospitals was located the most was Bangkok (13.03%), followed by Chonburee Province (3.75 %) and Chiangmai Province (2.81%) as the second rank and the third rank, respectively. The province whose hospitals were located the least was Samootsongkram Province (0.24 %). With regard to the locational pattern of hospitals in Thailand, it is found that two provinces whose hospitals were located at the highest level were Bangkok (13.03%) and Chonburee Province (3.75 %) (Map2). Only one province whose hospitals were located at the high level was Chiangmai Province (2.81%). Ten provinces whose hospitals were located at the moderate level were Nakornsawon, Udorntanee, Kongan, Nakornratchaseema, Bureerum, Ubonratchatanee, Samootpragarn, Surattanee, Nakornseetummarat and Songkla. There were thirty-five and twenty-nine provinces whose hospitals were located at the low level and the lowest level, respectively. In terms of analyzing the locational pattern by geographical region, it is found that the region which most contained hospitals was the Central Region (12.38%). The Northeast Region (12.38 %) and the South Region (12.38 %) ranked the second and the third, respectively. The region whose hospitals were located the least was the West Region (0.24 %).

With respect to analyzing correlation analysis, it is found that the locational pattern of hospitals was significantly positively correlated with the population size factor ($r = 0.910$) and the density factor ($r = 0.805$) at $\alpha = .05$, respectively. This indicates that when the population increases, the hospitals will also increase. On the contrary, if the population decreases, the hospitals will also decrease. For analyzing the multiple regression analysis, it is found that the population size factor had the most important factor ($\beta = 0.630$) influencing the locational pattern of hospitals in Thailand, followed by the density factor ($\beta = 0.388$), respectively. These two factors explained the variation of the locational pattern of hospitals in Thailand by 89.20 % ($R^2 = 0.892$).

The regression model was: $\hat{Y} = -.721 + 1.526E - 5Pop + .015Den$

Figure 2.
Map 2

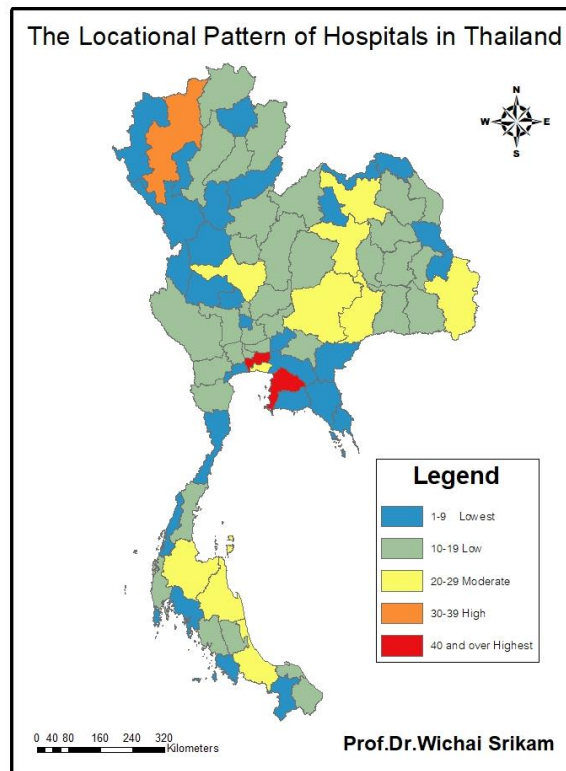


TABLE 1

The Location of Hospitals and Population Distribution in Thailand by Province and Region: Year 2012

Region/Province	No. of Hospital	Rank	No. of Population	Rank
North Region				
Chiangmai	33	1	1197092	1
Chiangrai	18	2	1063866	2
Lampang	18	3	761949	3
Narn	13	4	486598	4
Pra	11	5	477048	5
Uttraradit	9	6	461221	6
Mahongsorn	8	7	459535	7
Payao	7	8	403612	8
Lumpoon	7	9	243313	9
Total	124		5554234	
Northeast Region				
Nakornratchaseema	29	1	2590290	1
Kongan	28	2	1658275	3
Udonthane	26	3	1508765	5
Ubonratchatane	26	4	1819809	2
Bureerum	23	5	1561996	4
Galasin	17	6	684295	13
Roi-et	17	7	1306406	8
Sagonnakorn	17	8	1125348	10
Seesagate	16	9	1437776	6
Surin	16	10	1382591	7
Chaiyapoom	13	11	1129572	9
Loei	12	12	622944	14
Maharakarm	11	13	941718	11
Yasotorn	11	14	539443	15
Nakornpanom	10	15	706345	12
Nongkai	9	16	510838	16
Nongbualumpoo	9	17	503666	17
Buengarn	8	18	409994	18
Mookdaharn	7	19	341492	20
Umnartjarern	7	20	372707	19
Total	312		21154270	
East Region				
Chonburee	44	1	1109631	1
Praeenburee	17	2	471222	6
Jarntaburee	9	3	518386	5
Chacherngsao	9	4	681778	2
Trad	8	5	224341	7
Sagaew	8	6	546707	4
Rayong	7	7	631527	3
Total	102		4183592	
Central Region				
Bangkok	153	1	5692284	1
Samootpragarn	22	2	953932	3
Nakornsawon	20	3	1071764	2
Suparnburee	19	4	845496	6
Ayuttaya	17	5	790248	8
Nakornpatom	16	6	868375	4
Saraburee	15	7	611574	12
Pitsanulok	15	8	849992	5
Petchaboon	15	9	782187	9

Nontaburee	12	10	492038	15
Patoomtanee	12	11	795254	7
Pijit	12	12	521343	14
Singburee	11	13	219362	21
Lopburee	10	14	755634	10
Gumpangpet	9	15	726650	11
Chainart	9	16	333200	17
Sukothai	9	17	602131	13
Angtong	9	18	283941	19
Utaitanee	9	19	328335	18
Nakornnai-yok	5	20	227052	20
Samootsakorn	5	21	435588	16
Samootsongkram	3	22	194057	22
Total	407		18380437	
West Region				
Garnjanaburee	16	1	639346	2
Petchaburee	14	2	466967	4
Ratchaburee	11	3	834783	1
Tark	9	4	453298	5
Prajuabkeereekun	8	5	475522	3
Total	58		2869916	
South Region				
Nakornseetarmmarat	22	1	1529552	1
Songkla	22	2	1372754	2
Surattanee	20	3	907612	3
Choomporn	13	4	493029	8
Trang	13	5	521086	6
Parttanee	13	6	655259	4
Naratiwat	11	7	586754	5
Parnng-nga	11	8	256038	13
Parttaloong	11	9	504195	7
Grabee	7	10	376924	10
Pooget	7	11	261386	12
Yala	7	12	468508	9
Ranong	7	13	181331	14
Satoon	7	14	303462	11
Total	171		8417890	
Total	171		8417890	

CONCLUSION AND DISCUSSION

From the research findings, the province whose hospitals were located the most was Bangkok (13.03 %), followed by Chonburee Province (3.75 %) and Chiangmai Province (2.81%) as the second rank and the third rank, respectively. The province whose hospitals were located the least was Samootsongkram Province (0.24 %). With regard to the locational pattern of hospitals in Thailand, two provinces whose hospitals were located at the highest level were Bangkok (13.03%) and Chonburee Province (3.75 %) (Map2). Only one province whose hospitals were located at the high level was Chiangmai Province (2.81%). Ten provinces whose hospitals were located at the moderate level were Nakornsawon, Udonrtanee, Kongan, Nakornratchaseema, Bureerum, Ubonratchatane, Samootpragarn, Surattanee, Nakornseetummarat and Songkla. In terms of analyzing the locational pattern by geographical region, the region which most contained hospitals was the Central Region (12.38%). The Northeast Region (12.38 %) and the South Region (12.38 %) ranked the second and the third, respectively. The region whose hospitals were located the least was the West Region (0.24 %). With respect to analyzing correlation analysis, the locational pattern of hospitals was significantly positively correlated with the population size factor ($r = 0.910$) and the density factor ($r = 0.805$) at $\alpha = .05$, respectively. This indicates that when the population increases, the hospitals will also increase. On the contrary, if the population decreases, the hospitals will also decrease. For analyzing the multiple regression analysis, it is found that the population size factor had the most important factor ($\beta = 0.630$) influencing the locational pattern of hospitals in Thailand,

followed by the density factor ($\beta = 0.388$), respectively. These two factors explained the variation of the locational pattern of hospitals in Thailand by 89.20 % ($R^2 = 0.892$).

The regression model was: $\hat{Y} = -.721 + 1.526E - 5Pop + .015Den$

The reason why Bangkok has still become the most important location of hospitals is that it is the most densely populated province. Based on location of tertiary activities, it is generally in agreement with population: the more people there are in an area, the greater the number of tertiary activities offered^[14]. Moreover, Bangkok is the capital city of Thailand. All its areas have become urbanized. With regard to Oatsawaphonthanaphat, Srikam and Chokevivat's research study, it is found that the postpartum mothers in rural areas received more social support on Yoofai than the postpartum mothers in urban areas^[15]. Furthermore, almost all postpartum mothers lived in rural areas. The postpartum mothers had positive attitude toward rehabilitation of postpartum mothers based on Thai traditional medicine at the highest level^[16]. In addition, Bangkok plays a crucial role in the center of land, water and air transportations, education, commerce, industry, and services. According to the principle of spatial interaction, transportation is necessary because all economic activity does not occur at one point. In general, it is recognized that for nearly all kinds of movement, the interaction between places is inversely dependent on the distance between places. Thus, places located near to each other will tend to have a high degree of interaction and places remote from each other will likely have little interaction^[17]. Thus, these may be factors influencing the magnitude of hospital location. With regard to Chonburee Province, Chiangmai Province, Nakornratchaseema Province and Kongan Province as ranked second, third and fourth, respectively in terms of the importance of hospital location, it may be because these provinces are large provinces located in their regions. Chonburee Province is the largest province in the East Region while Chiangmai Province ranks the highest in the North Region. Nakornratchaseema Province and Kongan Province are the largest and the second largest provinces, respectively in the Northeast Region. With respect to the locational pattern by geographical region, the largest number of population was the most important factor affecting location of hospitals in the Central Region. Furthermore, the Northeast Region which had the second highest rank of hospitals has the second largest number of population of Thailand. Therefore, the population size factor and the density factor had the most and the second most important factors influencing the locational pattern of hospitals in Thailand. The findings are useful for planning to locate hospitals and health-care services in order to serve people appropriately.

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LEARNING ACHIEVEMENT OF STROKE OF THE ELDERLY IN SAMUTSONGKRAM PROVINCE, THAILAND

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ABSTRACT

A stroke is the disruption of oxygenated blood to the brain. It is a dangerous symptom which causes death or disability. However, an appropriate adjustment of health behavior and avoiding risk-factors can reduce a rate of sickness and death, including disability. The purposes of this research, titled "Learning Achievement of Stroke of the Elderly in Samutsongkram Province, Thailand" were to investigate the characteristics of elderly population structure and economy, to examine the risk of stroke of the elderly, and to compare between before and after-stroke learning of the elderly in Samutsongkram Province. The sample of 60 elderly people used to study was drawn by using a simple random sampling from the population of 60 years and over who live in Samutsongkram Province. The data were gathered in December, 2017 by using a questionnaire built by the researchers. The statistical techniques used for analyzing were frequency, percentage, mean (\bar{X}) and standard deviation (S.D), and paired t-test.

The research findings are that: 1) The characteristics of the elderly in Samutsongkram Province were mostly females (53.30 %), 60-69 years of age (66.67 %), non-smoking persons (96.67 %) and workers (46.67%). They had Body Mass Index (BMI) of over 25 (63.33 %), congenital disease (73.33 %), marriage status (50.00 %), the average income of less than 5,000 baht per month (70.00 %), and non-learning of stroke (63.33 %). 2) The elderly in Samutsongkram Province had the stroke risk at a high level (66.67%). 3) There is statistically significance difference at α .05 between before and after-stroke learning of the elderly in Samutsongkram Province (\bar{X} = 9.67 and \bar{X} = 16.70, respectively).

Key Words: Learning achievement; Stroke; The elderly

INTRODUCTION

Stroke is a dangerous disease which causes death or disability. However, an appropriate adjustment of health behavior and avoiding risk-factors can reduce a rate of sickness and death, including disability. A stroke occurs when the blood supply to an area of the brain is cut off. The symptoms depend upon the region of the brain that is affected by the loss of blood supply and can include changes in sensation or motor control [1]. Two main types of strokes are hemorrhagic and ischemic (the most common type). There are many ways to reduce a stroke risk. The easiest way is to have an annual health check-up. If any risk factors are found, doctors can take quick action and administer treatment before it is too late. Controlling blood pressure, cholesterol and blood sugar is imperative to minimize risk, and these levels should always remain within a normal range. Exercising regularly and having a well-balanced diet goes a long way towards minimizing the risk of stroke [1].

Stroke is found often and becomes a major problem in Thailand. Even though public health agencies attempt to take care of people who have a stroke in order to treat them safely based on the standard clinical tracer. Two factors of stroke are non-modifiable risk factor, i.e. old age and modifiable risk factor, i.e. hypertension, diabetes, cholesterol, heart attack and fat or metabolic syndrome [2]. Signs and symptoms of stroke are face drooping, arm weakness, and speech difficulty. Additional signs and symptoms of stroke may include weakness and difficulty of walking, blurred vision, dizziness, headache, confusion, difficulty of speaking, and loss of sensation [2].

Population ageing is one of the greatest social and economic challenges facing Thailand. This is because Thailand has become a perfect population ageing society. The number of older people is growing. Thailand is currently ranked the third most rapidly ageing population in the world. The number of people aged 60 and over in Thailand now stands at about eight million, accounting for 13 percent of the population. Population ageing is a relatively new occurrence for Thailand. It was just in 2001 that Thailand became an ageing population with more than 7% of the population over 65. By 2040, Thailand's aging population is expected to increase to 17 million, accounting for 25 percent of the population. This means that out of every four Thais, one will be a senior citizen [3].

Samutsongkram Province has begun to be an aging society. This is because in 2016 this province had the elderly with the number of 35,157 or 21.16 % of the whole population of the country. Samutsongkram Province

ranked the first in Health Region5 and ranked the second of Thailand in terms of the number of the elderly. The trend has increased steadily [4]. The aging society has a high risk of stroke because the old age is a non-modifiable risk factor. If the elderly know and understand about stroke, they can avoid the risk factors. Thus, elderly people at risk of stroke in Samutsongkram Province need to be examined and compared between before and after-stroke leaning.

THE RESEARCH PURPOSES

1. To investigate the characteristics of elderly population structure and economy in Samutsongkram Province
2. To examine the risk of stroke of the elderly in Samutsongkram Province.
3. To compare between before and after-stroke leaning of the elderly in Samutsongkram Province.

METHODOLOGY

The research titled Learning Achievement of Stroke of the Elderly in Samutsongkram Province, Thailand is a mixed method research between a quantitative research and a qualitative research. The sample of 60 elderly people used to study was drawn by using a simple random sampling from population of 60 years and over who live in Samutsongkram Province. The data were gathered in December, 2017 by using a questionnaire built by the researchers. The statistical techniques used for analyzing were frequency, percentage, mean (\bar{X}) and standard deviation (S.D), and paired t-test.

THE RESULTS

1. The Characteristics of Elderly Population Structure and Economy in Samutsongkram Province

Table 1
The Characteristics of Elderly Population Structure and Economy (n=60)

Elderly Population Structure and Economy	Number	%
Sex		
Male	28	46.67
Female	32	53.33
Age		
60-69 years	40	66.67
70-79 years	20	33.33
Body Mass Index (BMI)		
≥ 25	22	36.67
< 25	38	63.33
Smoke History		
Smoke	2	3.33
Non-smoke	58	96.67
Congenital Disease		
Congenital disease	44	73.33
Non-congenital disease	16	26.67
Education Level		
Elementary education/vocation	44	73.33
Secondary education	2	3.33
Two-year college	4	6.67
Bachelor's degree	10	16.67
Marriage Status		
Single	8	13.33
Married	30	50.00
Divorced	22	36.67

Table 1 (Continued)

Elderly Population Structure and Economy	Number	%
Occupation		
Worker	28	46.67
Private business	18	30.00
Staff of company	8	13.33
Government official/State enterprise	6	10.00
Average Income		
≤ 5,000 baht	42	70.00
5,001-10,000 baht	12	20.00
≥10,001 baht	6	10.00
Stroke Learning		
Learned	22	36.67
Not learned	38	63.33
Total	60	100

From Table 1, it is found that the characteristics of the elderly in Samutsongkram Province were mostly females (53.30 %), 60-69 years of age (66.67 %), non-smoking persons (96.67 %) and workers (46.67%). They had Body Mass Index (BMI) of over 25 (63.33 %), congenital disease (73.33 %), marriage status (50.00 %), the average income of less than 5,000 baht per month (70.00 %), and non-learning of stroke (63.33 %).

2. Examining the risk of stroke of the elderly in Samutsongkram Province

The elderly in Samutsongkram Province had the stroke risk at a high level (66.67%), followed by a moderate level (26.67%) and a low level (6.66%) as the second and the third, respectively (Table 2).

Table 2
The stroke risk of the elderly in Samutsongkram Province (n = 60)

Stroke risk	persons	%
Low level (12+ Scores)	4	6.66
Moderate level (5-11 Scores)	16	26.67
High level (0-4 Scores)	40	66.67
Total	60	100

3. Comparing between before and after-stroke learning of the elderly in Samutsongkram Province

Table 3
Understanding of stroke learning of the elderly in Samutsongkram Province (n=60)

Understanding of stroke learning of the elderly	Before learning		After learning	
	persons	%	persons	%
Low level (1-6 Scores)	43	71.67	4	6.66
Moderate level (7-14 Scores)	14	23.33	19	31.67
High level (15-20 Scores)	3	5.00	37	61.67
Total	60	100	60	100

From Table 3, it is found that before learning most elderly people understood about stroke at a low level (71.67%). Only 5.00% of them had the knowledge of stroke at a high level. However, after learning, most elderly people understood about stroke at a high level (61.67%). Only 6.66% of them had the knowledge of stroke at a low level.

Table 4

Comparing between before and after-stroke learning of the elderly in Samut Songkhram Province (n = 60)

Understanding of stroke learning of the elderly	\bar{X}	S.D.	t	P-value
Before-learning	9.67	3.95	11.12	0.00*
After-learning	16.70	5.35		

*P<0.05

From Table 4, it is found that before learning the elderly had the lower mean of stroke understanding (\bar{X} = 9.67) than the mean of after-learning (\bar{X} = 16.70). With respect to comparing by using paired t-test, it is found that there is statistically significance difference at α .05 between before and after-stroke learning of the elderly in Samut Songkhram Province.

CONCLUSION AND DISCUSSION

The research findings are that: 1) The characteristics of the elderly in Samut Songkhram Province were mostly females (53.30 %), 60-69 years of age (66.67 %), non-smoking persons (96.67 %) and workers (46.67%). They had Body Mass Index (BMI) of over 25 (63.33 %), congenital disease (73.33 %), marriage status (50.00 %), the average income of less than 5,000 baht per month (70.00 %), and non-learning of stroke (63.33 %). 2) The elderly in Samut Songkhram Province had the stroke risk at a high level (66.67%); 2) There is statistically significance difference at α .05 between before and after-stroke learning of the elderly in Samut Songkhram Province (\bar{X} = 9.67 and \bar{X} = 16.70, respectively). From the results, it is obvious that the elderly in Samut Songkhram Province had a congenital disease and chronic sickness, such as diabetes, hypertension, and high cholesterol, as well as having inappropriate behavior, e.g. drinking whisky, smoke, and lack of exercises. These are the causes of stroke [5].

By comparison between before and after-learning of stroke, it is found that before learning most elderly people understood about stroke at a low level (71.67%). But, after learning, most of them understood about stroke at a high level (61.67%). This result indicates the elderly gained knowledge about stroke that they watched videos not only the causes and symptoms but also methods of protection. [6] In accordance with Breckler's research study, knowledge and understanding affect learning of human behaviors [7]. Tummagoon [8] found that knowledge and perception of stroke had a significantly positive relationship with a behavior of stroke protection at α .05. Moreover, from his research study, Sooksai [9] found that after experiment, the sample gained more knowledge and understanding of stroke protection, including having the better behavior about stroke protection. Hence, encouraging the elderly to learn and understand about stroke will help them reduce the risk factors in order to prevent from death or disability [10].

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POPULAR THAI FOOD RECIPES IN FOREIGN: A CASE STUDY OF TAMMY'S THAI RESTAURANT IN ENGLAND

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ABSTRACT

Food is essential to human life. All countries have a unique and appropriate for their country. Thailand is famous for delicious food, has hygienic and nutritious. It is known and has been popular with foreigners as well. This study aimed to analyze the popular Thai Food in foreigners abroad. It collected data from a Thai restaurant in England. The number of customers who use the service, and recipes ordered a combination food. The research found that recipes that have been most popular, followed by the Mixed Starter, Tom Khakai and Todd MunPla respectively, due to be popular. The food is exotic to taste and is believed to be beneficial for health. However, Thai Food is mainly composed of vegetables, herbs. The properties pole to prevent symptoms and treatment.

Key Words: Thai Food, Tammy's Thai Restaurant.

INTRODUCTION

Thailand currently has restaurants abroad are many. Spread worldwide according to the National Business Online in 2016 found that worldwide there are Thai restaurants more than 14,000, with many in North America come first, followed by Europe and Australia. The popular food trend of Thailand for foreigners have been modified over time. The previous "Phad Thai" or "Tom Yum Goong" used to be the most popular. Until the era of the "Musaman" as the menu was voted as the world's no.1 super food is delicious. The customers who are mostly local people of that country. The people of Thailand and other nations that live there do, but a small number, The restaurant is known worldwide publisher Thailand. Part of the policy of the government policy. "Strategy for "Thailand Kitchen of the World "in 2002, is one of the important strategic period. To propel the economy to move forward. The intention is clearly to support the food pantry Thailand and Thailand to global markets and consumers worldwide. The aim is to increase the number of restaurants that Thailand has 20,000 locations worldwide by 2008.

An addition, a strategic Thai Food to World Kitchen. Also caters can be a major food exporter 1 in 5 of the world within 2-3 years supported a restaurant in Thailand's international distribution center for tourist information. It is the relationship of foreigners to get to know. Thailand has pushed the restaurant serves an authentic taste of Thailand. Get it at the highest level of safety and hygiene. The government also has put the support covers four main food Thailand (1) Raw materials (2) Ready to cook (3) Ready to eat (4) Restaurant. Such measures from the government. Thailand kitchen to world kitchen target potential. There are opportunities in the distribution and availability of Thai restaurants around the world without difficulty. It is a success in Thailand distribute food in restaurants that serve the business. It is considered one of the places that reflect the image of Thailand as a whole in terms of its food, culture, product, as well as providing hospitality with Thailand spread to the world. Thailand food is a food with a unique taste and a delicious menu with a wide choice. Prepared with meticulous precision and has high nutritional value. It is widely accepted by consumers. Thailand is a popular food quickly praised.

From the ranks of the news on CNN. Has good food and is very popular in the world of 2017 in the amount of total dietary 50 with food Thailand ranked 7, including No.4 Tom yam goong No.5 Pad Thai No.6 Som tam (Papaya salad) No.10 Massaman. No.19 Green curry No.24 Fried rice and No.36 moo nam tok.

In United Kingdom has found that Thai restaurants are scattered around the country, about 1,650 of the country that has the most number one. This means that most countries are eating a lot like Thai food. Appropriate to bring a sample of all Thai restaurants scattered all over the world.

METHODOLOGY

In this research has chosen to shop Tammy Thai Restaurant, which is located on Eastbourne Road, Newchapel, Lingfield, Surrey RS7 6SL United Kingdom as an example. Statistics collected by the diet Thailand's foreign clients. In April, July, November, December 2017 and January 2018 by participating in hospitality, customer service, serving food and other ready for research by observing interviews from foreign clients who use the service. owners and operators, which is Thailand.

RESULTS

The research found that restaurant, as a medium. There are seating for about 100 seats located along the street. The trip is quite convenient, not too far from downtown. Parking is available to fit about 50 cars. Employees of the store on weekdays The owners, husband and wife also have two head cooks, assistant cooks, 1 person, 2 person, food preparation and dish washer 4 is. Tuesday and Friday - Saturday will be a customer to use the service more than usual. Part-time waitress will add another 2-3 people.

The opening day will be available in the second period, during lunch time from 11:00 to 14:00 hrs., And the dinner from 17:00 to 21:00. From observation to clients during dinner. Some customers will not sit and dine. But to buy food to eat at home. The restaurant is called TAKE-AWAY.

In restaurant, where food is available. There are many types of services for a variety of clients including Starters, Soup, yum (Slud), Curry, Meat - Poultry, Seafood Dishes, Fish, Vegetarian, Rice and Noodle Dishes total of 83 items. Among all foods Starters orders are eaten before the main meal of rice. The shop will be bundled free prawn crackers table 1 plate. In terms of research customers have come to a total of table1,901, food orders with a total of 12,910 fast recipes Thai food has been the most popular respectively.

1. Mixed Starter A selection of chicken satay, vegetable rolls, samosa, minced prawn, galangal and chicken on toast, tiger prawn rolls, crab claw.
2. Tom Kha Kai A traditional thai soup with coconut milk, chicken and mushrooms.
3. Todd mun pla Dip-fried spicy thai fishes cakes, served with cucumber salad and delicate sweet chili sauce.
4. Poh pia todd Thai vegetable spring rolls, served with sweet chilli sauce.
5. Chicken Satay Charcoal grilled skewers of tender marinated chicken, served with a peanut sauce.
6. Phad Thai A traditional Thai fried rice noodles with bean sprouts and a choice of meats (chicken, prawn or bean curd)
7. Prawn Tempora Deep fried white prawn in tempora batter and served with a sweet chilli suace.
8. Peek gai yud sai Deep fried chicken wing, served with a sweet chilli suace.
9. Kra-doog-moo-yang Marinated grilled pork spare ribs.
10. Panang Red thick curry of beef, chicken or pork in a panang curry paste and flavoured with fresh lime leaf.

Table 1
Recipes Thailand that foreigners eat in the restaurant Tammy Thai Restaurant.

No.	Thailand Food name	Case (n=83)	%
1.	Mixed Starter	986	7.64
2.	Tom Kha Kai	528	4.09
3.	Todd mun pla	512	3.97
4.	Poh pia todd	511	3.96
5.	Chicken Satay	492	3.81
6.	Phad Thai	446	3.45
7.	Prawn Tempora	405	3.14
8.	Peek gai yud sai	319	2.47
9.	Kra-doog-moo-yang	243	1.89
10.	Panang	235	1.82
Total		5,303	41.08

Figure 1.
Tammy's Thai Restaurant in England



Figure 2.
Restaurant owner and Researcher



Figure 3.
Part of the foreign clients who use the service.



Figure 4.
Mixed Starter



CONCLUSION AND FUTURE WORK

Conclusion this research includes all kinds of food. All formulations are sold in the restaurant. Both sold at lunch and some food available for dinner only. Because all the food is popular in Thailand and overseas. It is a population sample. All information is used in research.

The reason for foreigners popular diet Thai food. Data from the interviews are curious to try the food because it is so new and delicious when you try to taste. As well as impresses with friendly service by courtesy beaming in Thai form. Thai cuisine is known for many valuable healths. It contains medicinal properties, such as preventive health liver, because combination of herbs. The Thai food was named TOM KHA KAI are mixture of plant names "TOM KHA KAI"

KHA (GALANGA) *Alpinia galanga* is a science that name (L.) Willd. held in the ZINGIBERACEAE family, is onwards benefits of Kha.- Help grow food helps nourish the body, Help nourish the fire element, There is substance 1-acetoxychavicol acetate (ACA) that stop cancer from the clay of carcinogens and thus help to prevent the occurrence of cancer by itself, Can help inhibit the growth of cancer cells, If only they can extract helps reduce blood sugar level, Help heal bronchitis, Anita-medical help resolve phlegm, Used as medication locally, gas stomach bloating. Heartburn tight belly belly walk with only a 1-inch-long live approximately feet to bring up its menu in detail, clear lime water. Use a liquid drink half a cup at a time, 3 times per day after meals, Help cure food poisoning symptoms, 903 wound in the stomach, Solve the symptoms, aching muscles The pain and swelling by using the address to bring roasted mixed with coconut oil, and then to cure the symptoms (the old, leaves, extracts only) Help maintain sexual potency, and other.

It has a lot of properties. Also the cuisine to include fresh peppers, onions, garlic, coconut milk, lemon grass, kaffir lime leaves, with the benefit of the protection and maintenance of health.

The research has been although the most popular recipes collected over a 10 recipe, and each recipe has a few per cent because foreigners who use the service, average food with a variety of restaurant. Nearly a hundred items to distribute the highest rank, only 986 times (7.64%), but it is statistically reliable because of the amount of food available to all, to 12, 901 times.

There is only one restaurant and one country does not cover foreign citizens all over the world. So be accurate the confirmation may not be fully. If statistics from many countries around the world. It make research results more accurate. However, it is difficult. It takes time and a lot of capital. So let's pass on to those who have the ability and knowledge. Capital and time Research in the future.

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THE STUDY ON FACTORS THAT AFFECTED DEMOCRATIC POLITICAL VIEWPOINT WITH MAINSTREAM MEDIA EXPOSURE

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ABSTRACT

Nowadays, Thai society becomes aware of political right. This suggests in terms of political participation passing through the democratic political viewpoint about political thoughts, views and beliefs. Public opinion is the viewpoint of the public regarding a particular matter, especially the influence viewpoint of university students as the future way of life. Viewpoint research plays an important role in understanding how thoughts, views and beliefs are formed, changed, and measured. By this way, media exposure makes the university students to share another person's feelings and emotions as if they are public thoughts, views and beliefs. Political Communication could wake up the political thoughts, views and beliefs for demanding the political viewpoint which makes the university students' viewpoint passing of traditional society to modernizing society. The research review will be summarized into 2 parts: democratic political viewpoint and mainstream media in politics.

This research is (1) To analyze the factors that affected democratic political viewpoint with 3 mainstream media exposure: newspaper, television and radio. It considers the mainstream media exposure on political news/scoop/contents of university students from 2 variables: birth place and field study. (2) To analyze the relationship between the mainstream media exposure in political news/scoop/contents and the democratic political viewpoint of university students.

The sample group of this study is the university students from Suan Sunandha Rajabhat University in the College of Innovation and Management with the total number of 126. The multi-stage random sampling with questionnaires as the tool for collecting the data. The analysis is on the statistical method in terms of frequency, percentage and chi-square test at the significant level = 0.05

The study on factors that affected democratic political viewpoint with mainstream media exposure produced the following findings:

1. The university students in the different of birth place are related to the different of media exposure in political news/scoop/contents from television only while the university students in the different of field study are unrelated to the different of media exposure in political news/scoop/contents from all 3 mainstream media (newspaper, television, and radio).

2. All 3 mainstream media (newspaper, television, and radio) exposure in political news/scoop/contents are related to the democratic political viewpoint of university students.

In conclusion, the media as television, radio and newspapers educates university students on both inside and outside of the university. The media exposure in political news/scoop/contents makes the university students have the information for supporting in term paper and advanced learning. The university students could learn the political news/scoop/contents by viewing the television, reading the newspaper, and listening to the radio in the dimensions of time spent on political issues (days per week). The study could set and used as the tool for finding the relationship between the mainstream media exposure in political news/scoop/contents and the democratic political viewpoint of university students.

The factors should be taken by the other variables in the future study such as the message of political news/scoop/contents as influence factors on democratic political viewpoint. In order to plan the democratic development to university students in terms of the way of life is to educate the university students by socializing the democratic political regime passing through mainstream media exposure with political news/scoop/contents for the political viewpoint development.

Keywords--Democratic political viewpoint, Media exposure

INTRODUCTION

Any consideration of public/democratic communication convincingly incorporates the interplay between the public sphere, civil society, and citizenship. First, the category of the public sphere has provided an ideal type for sketching the role of the media in contemporary societies. The media could facilitate one of the strengths of the concept of the public sphere, that of universalism, in terms of the principles of general accessibility to information and the full representation of different interests of the society. (Howley, 2010)

The immersion in television culture produces a "mainstreaming" effect, whereby differences based on cultural, social, and political characteristics are muted in heavy viewers of television. The result is that heavy

television viewers internalize many of the distorted views of the social and political world presented by television. For example, compared to the real world, television programs drastically underrepresent older people, and heavy viewers tend to similarly underestimate the number of older people in society. Television portrays crime and violence much more frequently than it occurs in real life, and these television portrayals seem to influence heavy viewers in this area as well. Heavy viewers are more likely than moderate or light viewers to believe that most people cannot be trusted and that most people are selfishly looking out for themselves. (Gerbner, 1984)

The influence of the media is neither blatant nor unqualified. Perhaps the most significant effects of media exposure come about after long-term, heavy use. Readers approach media products with a preexisting set of beliefs and experiences through which they filter media messages. Readers also occupy specific social positions that affect how they interpret the media. To understand the impact of media, therefore, we must remember that media consumption is often an active processing of information, not just a passive reception of media words and images. (Croteau and Hoynes, 2014)

Nowadays, Thai society becomes aware of political right. This suggests in terms of political participation passing through the democratic political viewpoint about political thoughts, views and beliefs. Public opinion is the viewpoint of the public regarding a particular matter, especially the influence viewpoint of university students as the future way of life. Viewpoint research plays an important role in understanding how thoughts, views and beliefs are formed, changed, and measured. By this way, media exposure makes the university students to share another person's feelings and emotions as if they are public thoughts, views and beliefs. Political Communication could wake up the political thoughts, views and beliefs for demanding the political viewpoint which makes the university students' viewpoint passing of traditional society to modernizing society. The research review will be summarized into 2 parts: democratic political viewpoint and mainstream media in politics.

OBJECTIVES

1. To analyze the factors that affected democratic political viewpoint with 3 mainstream media exposure: newspaper, television and radio. It considers the mainstream media exposure on political news/scoop/contents of university students from 2 variables: birth place and field study.

2. To analyze the relationship between the mainstream media exposure in political news/scoop/contents and the democratic political viewpoint of university students.

CONCEPTUAL FRAMEWORK

Democratic Political Viewpoint

Democratic societies, pride themselves on protecting freedom of the press and freedom of expression. Such societies are usually characterized by a more diverse mix of public and privately owned media outlets offering a variety of arts, news, information, and entertainment. The media in such societies are still subject to government regulation, but they are usually given much greater latitude to operate independently. However, in some democratic societies, the media are still largely controlled by a relatively small group of powerful interests—commercial corporations. In those cases, it is corporate domination of media rather than government control that is of most concern. (Croteau and Hoynes, 2014)

In the everyday political world, calls for media regulation come from both liberals and conservatives. However, the intended target of the regulation differs based on political orientation. The sides do not always line up neatly, but conservatives and liberals generally tend to approach the topic of regulation differently.

Liberals and the left usually see the government's role in media regulation as one of protecting the public against the domination of the private sector. (Conservatives see this as government meddling in the free market.) As we have seen, this view manifests itself in liberal support for regulating media ownership of outlets, programming, and technology, with the aim of protecting the public interest against monopolistic corporate practices. Inherent in this approach is the belief that the marketplace is not adequately self-regulating and that commercial interests can acquire undue power and influence.

Liberals and the left also tend to support regulation that encourages diversity in media content. Finally, liberals also support publicly owned media such as the Public Broadcasting Service (PBS) and NPR because such outlets can sometimes support important programming that may not be commercially viable. A central theme for liberals and the left is the need for diversity in all facets of the media.

Conservatives and the right tend to respond to such arguments with staunch support for property rights and the free market system. (Liberals see this as protecting corporate interests at the expense of the public interest.) When it comes to regulating ownership and control of media, conservatives tend to advocate a laissez-faire approach by government. They caution against the dangers of bureaucratic government intervention and the tyranny of "political correct" calls for diversity. They can often be enthusiasts for the ability of the profit motive to

lead to positive media developments for all. Conservatives generally see the marketplace as the great equalizer, a place where ideas and products stand or fall based on the extent of their popularity. They often portray ideas like the Fairness Doctrine or public television as illegitimate attempts by those outside the American mainstream to gain access to the media. (Croteau and Hoynes, 2014)

The basic tenets of this liberal dispensation emphasize an introduction of extensive competition among individuals and organized groups (especially political parties) for political power. The media have been identified as crucial elements in the process of building, consolidating, and nurturing a democratic society. Democratization thus envisages an expansion of communicative democratic spaces.

A study of democratization processes is inevitable a study of access to communicative spaces. The media's role democratization process resolves around their relation to wider structures and systems of power contestation. The linkage invites a reconsideration of the relative power of media in relation to reorganized interests. Individuals and institutions vying for power also contend to influence the media in terms of representation, access, and participation. Political entities compete for media space and strategically mobilize forms of communicative power. The media in a democracy constitute prime areas for contending interests, values, and viewpoints—in pursuits of public recognition, legitimacy, and strategic aims. (Ndlela, 2010)

A political system consists of the system and the people who run the system. The human element on this research in case of university students is most important here. Democracy is not only a lip service to the idea that is critical of opinion and attitude but they could do something to support it. The practitioners have to possess democratic beliefs, viewpoint and culture.

From the basic of political socialization, it shall be defined restrictively as those development processes through which persons acquire political orientations and patterns. Political culture is a subjective psychological phenomenon that appears in the process of interaction between individuals and the political system. The idea of political culture which is essentially the argument that is the differences in societal institutions (norms and values) is shaping the landscape of political activity. Political culture may influence the preference for certain kinds of policies as well as the particular relationship between freedom and equality. (O'Neil; 2015)

The meaning of belief could be summarized into 2 items: First, Conviction or acceptance that certain things are true or real; Second, Complete, unquestioning acceptance of something even in the absence of proof and, esp., of something not supported by reason. Political participation entails communicating with elected officials and others in government-expressing viewpoints and demanding certain actions or public policies from the government. Vehicles for political participation include political parties, interest groups, and a free press. Political participation can be either conventional or unconventional. Conventional participation includes voting, running for office, assisting with political campaigns, writing to elected officials, writing letters to newspapers about particular issues, and joining an interest group to influence public policies. Unconventional participation includes protests, mass demonstrations, civil disobedience, and sometimes even acts of violence. (Payne; 2009)

Democratic political culture is a product of political socialization passing through basic socialization, political socialization process, political recruitment process. (Pye; 1963) Democratic political viewpoint with the response by political stimuli leads to political personality. The democratic political viewpoint could support democratic regime to be sustainable for the value and the honor of people by itself.

Mainstream Media in Politics

Media exposure as one of the communication behavior which composes of 4 patterns. That are media exposure, communication processes, Motivational gratifications, and Media credibility and preferences (McLeod and O'Keefe; 1972). Becker (1983) defines media exposure as the meaning of the information exposure as follows: Information Search, Information Receptivity, and Experience Receptivity.

Almond and Verba (1972) suggested that political information of political knowledge appearing in political systems: input, process, output, feedback, and environment. The systems are as General object (history, geography, political institute and organization, etc.), Input of political objects (political party, bureaucracy, benefit group, member of parliament, media system, etc.), Output of political objects (parliament, court, bureaucracy, etc.), and Political self as object (personal role to politic, self evaluation in politic, etc).

The role of the media has to be assessed in relation to freedom of expression, that is, the ability for citizens to participate in political discussion and safely express their political convictions by voting for a party of their choice without fear of reprisals. Ideally, the media should provide communicative spaces where people can openly participate in discussion and debates. The metaphor of space defines the social, political, and physical configurations in which positions of power, domination, and marginality are negotiated and reproduced (Barnett, 2003). However, in authoritarian societies, or during periods of conflict, there is an inclination by the powerful sectors toward controlling the communicative spaces. Therefore, from a Gramscian perspectives, the media have to be interpreted as instructions for disseminating and reinforcing the hegemonic perspective. (Ndlela, 2010)

In general, citizens' media involve considerable occurrences of representation and participation of the "ordinary" (people, issues, and activities) in social and political reality, mediating complex power relations and configurations across space and time; they are bottom-up locals "in which citizens enter into disputes about who does and who ought to get what, when and how" (Keane, 1998).

Faced by multifaceted problems, the government fundamentally shifted the communication spaces. It did so by emasculating the mainstream national media, attempting to influence public opinion in its own favor by directing the state-owned newspaper oligopoly to serve out government propaganda; by regulating the reception of international media in the country; and by restricting external communication channels. The government also developed media policies that undermine the growth of the media and their possible extension to new areas, creating an environment of insecurity that scares away local investors, and put up stringent conditions that effectively discourage foreign investment and limit access to the media.

In the globalized world, learning democratic political knowledge is becoming an important element and tool in establishing effective relations and interaction with people of all countries. Learning and understanding political viewpoint and culture would lead to ensure friendly and constructive relationship and next to social and economic engagement at last. For example, the economic significance of tourism is beneficial to the global economy and to individual economies, including its impact on the relationship between the economic, social, culture, and politics (Sriupayo; 2016).

For higher education, university students have the time to spent for following the political events of all counties, collecting the data in the political news over the world, and reporting the term paper report to the class. The study is to use the benefits of media exposure by political socialization to form the information, the idea, the knowledge, and the wisdom in political process as follows: to transfer the information of political knowledge and understanding; to set the political agenda; to influence and cultivate political beliefs and to develop the country's politics.

Having realized the impact of higher education development on producing quality human resources to keep pace with the challenges brought about by globalization, in teaching, risk requires a special kind of trust in processes as well as university students. Teaching in the knowledge society is a need to show political courage and integrity by reconnecting the agenda for educational improvement with a renew assault on social impoverishment. (Hargreaves; 2003)

METHODOLOGY

The core concepts of democratic political viewpoint for measuring the scores by summarizing the democratic political culture into 7 issues as follows:

1. To have trust and faith in democratic political regime
2. To respect in humanity and capability to each other
3. To realize in responsible for civic citizen
4. To have the courage to give the opinion and comments with reasonableness and creativity
5. To participate in political activity and admit the rule in democratic regime
6. To concede the different opinion
7. To admit the authority with reasonableness and legitimacy

The theoretical framework of the media exposure in political news/scoop/contents could be summarized in terms of measuring time spent (days per week) on mainstream media as newspaper, television, and radio.

The sample group of this study is the university students from Suan Sunandha Rajabhat University in the College of Innovation and Management with the total number of 126. The multi-stage random sampling with questionnaires as the tool for collecting the data. The analysis is on the statistical method shown as frequency, percentage and chi-square test at the significant level = 0.05

RESULTS

The analysis of sample group in the research named "The study on factors that affected democratic political viewpoint with mainstream media exposure" is shown in the fact finding as follows:

Table 1
Birth place and field study of sample group

Item	Category	Number	Percentage
Birth place	Bangkok	52	41.3
	Non-Bangkok	74	58.7
Field study	Political Science	34	27.0
	Non-Political Science	92	73.0

Table 1, the sample group is 126 university students which divided into 2 items: birth place and field study. Birth place divided into 2 categories: Bangkok and Non-Bangkok. Field study is also divided into 2 categories: Political Science and Non-Political Science.

Table 2
Democratic political viewpoint

Democratic political viewpoint	Number (persons)	Percentage
First group (32-42 scores)	39	31.0
Second group (43-62 scores)	87	69.0

Table 2, The democratic political viewpoint of sample group classified by the score of two democratic political viewpoint: first group (32-42 scores) and second group (43-62 scores) which shown in the table below.

The hypothesis testing in 3 relationships between the mainstream media exposure in political news/scoop/contents (newspaper, television, and radio) and the democratic political viewpoint are shown and the factors that affected the mainstream media exposure in political news/scoop/contents and the democratic political viewpoint of university students are shown in 3 items in the table respectively as follows:

1. Newspaper

The study on factors that affected democratic political viewpoint with mass media exposure from **newspaper** could be summarized as follows:

Table 3
Time spent on political news/scoop/contents from **newspaper** and democratic political viewpoint

Time spent on political news/scoop/contents from newspaper (days/week)	Democratic Political Viewpoint		Total (persons)
	First group (32-42 scores)	Second group (43-62 scores)	
Low time spent (0-1 day/week)	13 (20.0%)	52 (80.0%)	65 (100%)
High time spent (2-7 days/week)	26 (42.6%)	35 (57.4%)	61 (100%)
Total (persons)	39 (31.0%)	87 (69.0%)	126 (100%)

Chi-square = 7.49, d.f. = 1, sig (α) = 0.05

Table 3, the media exposure as time spent on political news/scoop/contents from **newspaper** (days/week) of university students in the table. The Chi-square statistic shows the relationship between time spent on political news/scoop/contents from **newspaper** and the democratic political viewpoint of university students is related. Most of university students from first group (32-42 scores of democratic political viewpoint) spent the time in the high level (2-7 days/week) while most of university students from second group (43-62) scores of democratic political viewpoint) spent the time in the low level (0-1 day/week).

Table 4
Birth place and time spent on political news/scoop/contents from **newspaper**

Birth place	Time spent on political news/scoop/contents from newspaper (days/week)			Total (persons)
	Low time spent (0-1 day/week)	High time spent (2-7 days/week)	The ratio of low time spent to high time spent (Difference)	
Bangkok	27	25	100: 92.6 (7.4)	52
Non-Bangkok	38	36	100: 94.7 (5.3)	74
Total (persons)	65	61		126

Chi-square = 0.004, d.f. = 1, sig (α) = 0.05

Table 4, the analysis of time spent on political news/scoop/contents from **newspaper** (days/week) is shown in the table below. The ratio of low time spent to high time spent of the sample group from Bangkok (7.4) is more than non-Bangkok (5.3). The Chi-square statistic shows the relationship between time spent on political news/scoop/contents from **newspaper** and birth place of university students as the sample group who answered the questionnaires is unrelated.

Table 5
Field study and time spent on political news/scoop/contents from **newspaper**

Field study	Time spent on political news/scoop/contents from newspaper (days/week)			Total (persons)
	Low time spent (0-1 day/week)	High time spent (2-7 days/week)	The ratio of low time spent to high time spent (Difference)	
Political Science	17	17	100: 100 (0)	34
Non-Political Science	48	44	100: 91.7 (8.3)	92
Total (persons)	65	61		126

Chi-square = 0.047, d.f. = 1, sig (α) = 0.05

Table 5, the analysis of time spent on political news/scoop/contents from **newspaper** (days/week) is shown in the table below. The difference between the ratio of low time spent to high time spent of the sample group from the field study of political science (0) is less than non-political science (8.3). The Chi-square statistic shows the relationship between time spent on political news/scoop/contents from **newspaper** and field study of university students as the sample group who answered the questionnaires is unrelated.

Table 6

The reasons for time spent on political news/scoop/contents from **newspaper** are as follows:

Reasons for time spent on political news/scoop/contents from newspaper	percentage
(1) interesting head-lines news/scoop/contents	52.4
(2) details of political news/scoop/contents	19.0
(3) personal belief in political news/scoop/contents	11.1
(4) rapid report in supporting news/scoop/contents	11.1
(5) others	6.3

2. Television

The study on factors that affected democratic political viewpoint with mass media exposure from **television** could be summarized as follows:

Table 7

Time spent on political news/scoop/contents from **television** and democratic political viewpoint

Time spent on political news/scoop/contents from television (days/week)	Democratic Political Viewpoint		Total (persons)
	First group (32-42 scores)	Second group (43-62 scores)	
Low time spent (0-1 day/week)	11 (18.6%)	48 (81.4%)	59 (100%)
High time spent (2-7 days/week)	28 (41.8%)	39 (58.2%)	67 (100%)
Total (persons)	39 (31.0%)	87 (69.0%)	126 (100%)

Chi-square = 7.95, d.f. = 1, sig (α) = 0.05

Table 7, the media exposure as time spent on political news/scoop/contents from **television** (days/week) of university students in the table. The Chi-square statistic shows the relationship between time spent on political news/scoop/contents from **television** and the democratic political viewpoint of university students is related. Most of university students from first group (32-42 scores of democratic political viewpoint) spent the time in the high level (2-7 days/week) while most of university students from second group (43-62 scores of democratic political viewpoint) spent the time in the low level (0-1 day/week).

Table 8
Birth place and time spent on political news/scoop/contents from **television**

Birth place	Time spent on political news/scoop/contents from television (days/week)			Total (persons)
	Low time spent (0-1 day/week)	High time spent (2-7 days/week)	The ratio of low time spent to high time spent	
Bangkok	6	46	13.0: 100 (87.0)	52
Non-Bangkok	12	62	19.4: 100 (80.6)	74
Total (persons)	18	108		126

Chi-square = 0.546, d.f. = 1, sig (α) = 0.05

Table 8, The analysis of time spent on political news/scoop/contents from **television** (days/week) is shown in the table below. The difference between the ratio of low time spent to high time spent of the sample group from Bangkok (87.0) is more than non-Bangkok (80.6). The Chi-square statistic shows the relationship between time spent on political news/scoop/contents from **television** and birth place of university students as the sample group who answered the questionnaires is unrelated.

Table 9
Field study and time spent on political news/scoop/contents from **television**

Field study	Time spent on political news/scoop/contents from television (days/week)			Total (persons)
	Low time spent (0-1 day/week)	High time spent (2-7 days/week)	The ratio of low time spent to high time spent	
Political Science	6	28	21.4: 100 (80.6)	34
Non-Political Science	12	80	15.0: 100 (85.0)	92
Total (persons)	18	108		126

Chi-square = 0.429, d.f. = 1, sig (α) = 0.05

Table 9, the analysis of time spent on political news/scoop/contents from **television** (days/week) is shown in the table below. The difference between the ratio of low time spent to high time spent of the sample group from the field study of political science (80.6) is less than non-political science (85.0). The Chi-square statistic shows the relationship between time spent on political news/scoop/contents from **television** and field study of university students as the sample group who answered the questionnaires is unrelated.

Table 10
The reasons for time spent on political news/scoop/contents from **television** are as follows:

Reasons for time spent on political news/scoop/contents from television	percentage
(1) rapid report in supporting news	48.4
(2) details of political news	19.0
(3) personal belief in political news	13.5
(4) personal belief in news presenter	10.3
(5) others	4.0

3. Radio

The study on factors that affected democratic political viewpoint with mass media exposure from **radio** could be summarized as follows:

Table 11

Time spent on political news/scoop/contents from **radio** and democratic political viewpoint

Time spent on political news/scoop/contents from radio (days/week)	Democratic Political Viewpoint		Total (persons)
	First group (32-42 scores)	Second group (43-62 scores)	
Low time spent (0-1 day/week)	20 (20.8%)	76 (79.2%)	96 (100%)
High time spent (2-7 days/week)	19 (63.3%)	11 (11.5%)	30 (100%)
Total (persons)	39 (31.0%)	87 (90.6%)	126 (100%)

Chi-square = 19.32, d.f. = 1, sig (α) = 0.05

Table 11, the media exposure as time spent on political news/scoop/contents from **radio** (days/week) of university students in the table. The Chi-square statistic shows the relationship between time spent on political news/scoop/contents from **radio** and the democratic political viewpoint of university students is related. The number of university students from first group (32-42 scores of democratic political viewpoint) spent the time in the high level (2-7 days/week) as same as the low level (0-1 day/week) while most of university students from second group (43-62 scores of democratic political viewpoint) spent the time in the low level (0-1 day/week).

Table 12

Birth place and time spent on political news/scoop/contents from **radio**

Birth place	Time spent on political news/scoop/contents from radio (days/week)			Total (persons)
	Low time spent (0-1 day/week)	High time spent (2-7 days/week)	The ratio of low time spent to high time spent	
Bangkok	29	23	100: 79.3 (20.7)	52
Non-Bangkok	56	18	100: 32.1 (77.9)	74
Total (persons)	85	41		126

Chi-square = 5.513, d.f. = 1, sig (α) = 0.05

Table 12, the analysis of time spent on political news/scoop/contents from **radio** (days/week) is shown in the table below. The difference between the ratio of low time spent to high time spent of the sample group from Bangkok (20.7) is less than non-Bangkok (77.9). The Chi-square statistic shows the relationship between time spent on political news/scoop/contents from **television** and birth place of university students as the sample group who answered the questionnaires is related. That are most university students as the sample group who spent the high time or 2-7 days/week on political news/scoop/contents from radio having birth place to be Bangkok (23 persons) more than Non-Bangkok (18 persons), and the sample group who spent the low time or 0-1 day/week on political news/scoop/contents from radio having birth place to be Non-Bangkok (56 persons) more than Bangkok (29 persons)

Table 13

Field study and time spent on political news/scoop/contents from **radio**

Field study	Time spent on political news/scoop/contents from radio (days/week)			Total (persons)
	Low time spent (0-1 day/week)	High time spent (2-7 days/week)	The ratio of low time spent to high time spent	
Political Science	27	7	100: 25.9 (74.1)	34
Non-Political Science	58	34	100: 58.6 (41.4)	92
Total (persons)	85	41		126

Chi-square = 3.030, d.f. = 1, sig (α) = 0.05

Table 13, the analysis of time spent on political news/scoop/contents from **radio** (days/week) is shown in the table below. The difference between the ratio of low time spent to high time spent of the sample group from the field study of political science (74.1) is more than non-political science (41.4). The Chi-square statistic shows the relationship between time spent on political news/scoop/contents from **radio** and field study of university students as the sample group who answered the questionnaires is unrelated.

Table 14

The reasons for time spent on political news/scoop/contents from **radio** are as follows:

Reasons for media exposure in political issues on radio	percentage
(1) inattention listening	49.2
(2) rapid report in supporting news	15.9
(3) details of political news	12.7
(4) personal belief in political news	7.9
(5) others	14.3

CONCLUSION

The study on factors that affected democratic political viewpoint with mainstream media exposure produced the following findings:

1. The university students in the different of birth place are related to the different of media exposure in political news/scoop/contents from television only while the university students in the different of field study are unrelated to the different of media exposure in political news/scoop/contents from all 3mainstream media (newspaper, television, and radio).

2. All 3mainstream media (newspaper, television, and radio) exposure in political news/scoop/contents are related to the democratic political viewpoint of university students.

In conclusion, the media as television, radio and newspapers educates university students on both inside and outside of the university. The media exposure in political news/scoop/contents makes the university students have the information for supporting in term paper and advanced learning. The university students could learn the political news/scoop/contents by viewing the television, reading the newspaper, and listening to the radio in the dimensions of time spent on political issues (days per week). The study could set and used as the tool for finding the relationship between the mainstream media exposure in political news/scoop/contents and the democratic political viewpoint of university students.

The factors should be taken by the other variables in the future study such as the message of political news/scoop/contents as influence factors on democratic political viewpoint. In order to plan the democratic development to university students in terms of the way of life is to educate the university students by socializing the democratic political regime passing through mainstream media exposure with political news/scoop/contents for the political viewpoint development.

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TIGHTNESS & STRENGTHENING OF LEG WITH SELF STIMULATES MASSAGE IN THAI TRADITIONAL MEDICINE IN SCHOOL AGE CHILD

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ABSTRACT

Issues of the school children's muscle legs are not strong. Consequences of lack movement, a private world, obesity issues, weak, fatigue, no power, no going out to play, insufficient sleep cause cumulative toxicity in children, more a cold, more allergy symptoms, children will not be refreshed, learning is even worse. Those are impact of growth, increase height and accident in School Age Children. Aim: To study tightness & Strengthening of legs with the self stimulates Thai health massage in Thai traditional medicine in the school age children. Quasi- experimental research used the school age children (6-12 year old) 25 samples; assessment of leg muscles tightness (T) & strength-tightness (ST) measurement at lower left(L) and right(R) leg before and after the self stimulates Thai health massage. Thai health massage 1 time (30 minutes) per week total 5 times. Opening Children Music, comparatives analyze leg muscles tightness & strength-tightness measurement data before and after trial with compare mean Paired-Sample t-test. Results: The test compares left and right lower leg muscles tightness & strength-tightness measurement before and after the self stimulates Thai health massage in the school age children, 30 minutes each time: 3 weeks, have statistically significant differences 0.05 in 1st week (TL:0.014, TR: 0.028); 2nd week (TL: 0.007) and 3rd week (TL:0.000, TR: 0.002), (STL:0.000, STR: 0.001). Leg muscles tightness & strength-tightness measurements were more after than before the self stimulates Thai health massage in the school age children: left leg muscles tightness measurement (TL) 1st week, 2nd week, 3rd week □ before (2.12) and □ after (2.44, 2.52, 2.68 respectively); right leg muscles tightness measurement (TR) 1st week, 2nd week, 3rd week □ before (2.24) and □ after (2.48, 2.44, 2.76 respectively) and strength-tightness measurements 3rd week □ before, after (STL: 2.18, 2.76); (STR: 2.26, 2.82). Conclusions: Tightness & Strengthening of left and right lower leg muscles before and after the self stimulates Thai health massage in the school age children have significant difference 0.05: in 1st week; 2nd week and 3rd week. The self stimulates Thai health massage in the school age children helps tightness & strengthening of legs.

Keywords: Tightness, Strengthening, Self Stimulates Massage, School Age Children

INTRODUCTION

Stabilizer activities and body movement, school age children (6-12 years old) has growth and movement to go in the complete vertical direction, will focus on the use of large muscles, legs, include walking on the heels, walk on foot reverse, single leg jump, start a 2-wheels bike, stand with one leg and close to the eyes, stand with long jump etc., as practice skills tightness and strengthens the leg muscles. This will start the direction of learning, must be exercise, less parental dependency, interested friends outside. Outdoor play is very important, helping both physical and mental health, endurance Training, express emotions, relax tension, and learn to love groups, losing and win. The influences of television, smartphone, computer, internet, games and robot have a baby to stay with seeing the list TV and playing the games. The school children lack movement, a private world, obesity issues, weak, fatigue, no power, no going out to play, insufficient sleep cause cumulative toxicity in children, more a cold, more allergy symptoms, children will not be refreshed, learning is even worse. All Issues because muscle problems are not strong. Those are impact of growth, increase height and accident in School Age Children [1], [2], [7], [8].

Principles of Thai health massage in Thai Traditional Medicine help the system of the body back to work better to include blood circulatory system, Oxygen and food Delivery to feed the body, Lymphatic system, receiving and sending toxins and the waste produced by the body to get rid of body, Nervous system, awake to feel more sensitive, Muscular system, to be stronger, to increase tolerance, Respiratory system, Dermatological system and Relaxing mind. The self stimulates Thai health massage improves physical fitness, reduce the risk of injury and reduce the pain of the muscles, increase blood and nutrients to more tissue, helps muscles and nervous systems work together better. Children will more learn and help themselves [3], [4], [9], [10].

OBJECTIVE

1. To study Tightness of muscle legs with the self stimulates Thai health massage in Thai traditional medicine in the school age children.
2. To study Strengthening of legs with the self stimulates Thai health massage in Thai traditional medicine in the school age children.

Hypothesis

1. Tightness and strengthening measurements of legs before and after the self stimulates Thai health massage in the school age children has difference.
2. Tightness and Strengthening measurements of legs have higher means after than before the self stimulates Thai health massage in the school age children.

Literature & Theory

Thai health massage to strengthen the leg muscles [3], [4], [5].

Benefits of health massage use as a massage to promote physical health and mental state to complete, that will help the red and black blood circulation and Lymphatic system, flow up and down more convenient, strong bones, better performance muscles, eliminate waste in the muscles out of skin, increased flexibility, feeling relaxed and comfort, reduce stress and more actives.

How to Massage Strengthen Leg Muscles

1. Sit down straight leg using the left and right thumb press down, Four fingers support the leg, Basic massage left and right leg, Open “Wind Door” (Palm press straight groin turn The side of the thumb to body and four fingers press Thigh Lean forward count 1-10 then release)

2. Twist waist Sitting posture and lower right leg toward leftmost on left leg, Right outer leg massage and left inner leg massage, do the switch lower left leg toward rightmost on right leg, Left outer leg massage and right inner leg massage.

Relax after a massage posture: Ankle sprain exercise posture is Thigh toe posture

Preparation: Standing clutch wall, Split foot equal width of shoulder, Bend your normal leg up and place it on your knee, Toe foot tip of the other side Straighten up, with tense back knee leg and curb bottom, keep calm count 1-10, then return to preparation posture, then switch the other legs

- Advice:**
1. should regularly general fitness
 2. Sleep well enough every day
 3. Should eat foods that are beneficial

Related Work

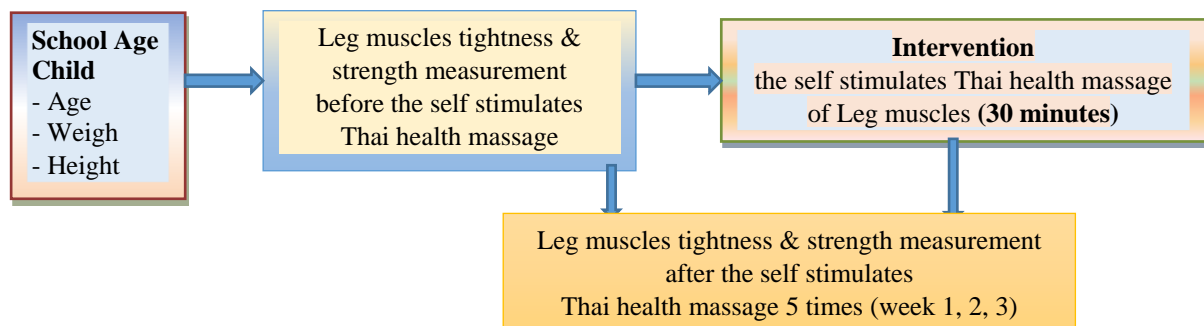
1.1 The Effects of Applied Thai Massage on Physical Fitness among Athletes: A Pilot Study

Chanawong Hongsuwan, Wichai Eungpinichpong, Uraiwan Chatchawan (2014) found that seven physical fitness tests consisted of the sit-and-reach test (flexibility), handgrip (strength), 40-yards technical test (agility), 50-meters speed (speed), sit-ups and push-ups (muscles endurance), multistage fitness test (VO2 max) were measured before and a day after 3 sessions of Thai massage, all of the physical fitness tests were significantly improved after the three sessions of Thai massage [5].

1.2 Comparison of Skin Appearance with Appropriate Time in Self Reflexology Area with Thai Traditional Medicine in Geriatrics

Natsinee Sansuk (2017) found that Pearson Chi-Square test, during the three-time results in change on the skin appearance of age and mood the elderly a statistically significant no difference 0.10, Fifth Inner Leg Signal Reflexology, ten seconds press, have appropriate time to stimulating affect the skin appearance at self-reflexology area of Thai Traditional Medicine in Geriatrics [6].

Figure 1
The conceptual framework of research



METHODOLOGY

Research is quasi experimental research. The samples were selected based on inclusion and exclusion criteria, the experimental group of 25 school age children samples; assessment of leg muscles tightness and strength measurement at lower left and right leg before and after the self stimulates Thai health massage.

Recording leg muscles tightness and strength measurement at lower left and right leg before the self stimulates Thai health massage in the school age children, Intervention is leg muscles Thai health massage in Thai Traditional Medicine and recording leg muscles tightness and strength measurement at lower left and right leg after the self stimulates Thai health massage 1 time (30 minutes) per week total 5 times. Opening Children Music, comparatives analyze leg muscles tightness and strength measurement data before and after trial.

Inclusion criteria:

As a child 6-12 years old, either male or female, can do daily routines, volunteer to join the project by parental consent.

Exclusion criteria:

The group has a moving problem; Children with osteoporosis; Special Children Group and wants to end the experiment.

Precautions Massage:

Caution for The case of tearing the muscles or the control of the expert

The inner shin bones of lower leg do not force press, it may cause bruising nerve and ankle bones cannot move.

Data Collection:

Interview and Recording form for assessment of leg muscles tightness and strength measurement at lower left and right leg before and after the self stimulates Thai health massage in the school age children by research assistant, researcher and specialists of Thai health massage, teaching self stimulates Thai health massage of the school age children were correct. The study areas were Watt Swat Wari Sima Ram School and Watt Swat Wari Sima Ram community, Dusit, Bangkok, Thailand.

Data analysis:

Analysis of experimental data [11] using frequency, percentage, mean, standard deviation, coefficient of variation. Compare Means Paired-Sample t-test results comparison of processing leg muscles strength measurement between before and after the self stimulates Thai health massage.

Data representation:

The test compares leg muscles tightness and strength measurement before and after the self stimulates Thai health massage by implied 1(less strong), 2(moderate) and 3(very strong).

RESULTS

General information of school age child samples

School age children, 25 samples, who are interested in participating by parental consent have the average age, weigh, height 9.8, 33.43, 134.6 (respectively); standard deviation 1.29, 8.54, 9.6 (respectively).

Data of leg muscles tightness and strength-tightness measurement

1. Data distributions are normal curve.

2. Paired Samples Correlations test compare means by Pearson's Product Moment Correlation Coefficient (r), significance level α is 0.05. Pearson's Correlation Coefficient (r) of leg muscles tightness and strength-tightness measurement at lower leg (left & right) measure before and after the self stimulates Thai health massage in the school age children at 1, 2, 3 week. From Table 1.

Table 1

Pearson's Correlation Coefficient (r) of leg muscles tightness (T) & strength-tightness measurement (ST)

Experiment	Paired of compare means	n	Correlation (r)	Relationship level
Week 1	1 pair before and after left leg (T) week 1	25	.548*	moderate
	2 pair before and after right leg (T) week 1	25	.700*	high
Week 2	3 pair before and after left leg (T) week 2	25	.360	low
	4 pair before and after right leg (T) week 2	25	.333	low
Week 3	5 pair before and after left leg (T) week 3	25	.379	low
	6 pair before and after right leg (T) week3	25	.281	low
Week 3 ST	5 pair before and after left leg (ST) week 3	25	.287	low
	6 pair before and after right leg (ST) week3	25	.143	low

* Significant level .05

A comparison of leg muscles tightness and strength- tightness measurement

Statistics Compare Means Paired-Sample t-test, comparison of leg muscles tightness and strength-tightness measurement at lower leg (left & right) with the three-time measure on before and after the self stimulates Thai health massage in the school age children at 1, 2, 3 week each long 30 minutes, by implied 1(less strong), 2(moderate) and 3(very strong). From Table 2.

Table 2

A comparison of leg muscles tightness (T) & strength-tightness measurement (ST)

Experiment	leg muscles strength	n	Before massage		After massage		t
			□	S.D.	□	S.D.	
Week 1	left leg (T) week 1	25	2.12	.78	2.44	.65	.014*
	right leg (T) week 1	25	2.24	.83	2.48	.65	.028*
Week 2	left leg (T) week 2	25	2.12	.78	2.52	.51	.007*
	right leg (T) week 2	25	2.24	.83	2.44	.51	.116
Week 3	left leg (T) week 3	25	2.12	.78	2.68	.56	.000*
	right leg (T) week3	25	2.24	.83	2.76	.44	.002*
Week 3 ST	left leg (ST) week 3	25	2.18	.776	2.76	.436	.000*
	right leg (ST) week3	25	2.26	.765	2.82	.350	.001*

* Significant level .05

CONCLUSION AND FUTURE WORK

School age children, 25 samples, who are interested in participating by parental consent have the average age 9.8 year, average weigh 33.43 kilograms, average height 134.6 centimeters. Data distributions are normal curve.

The test compares left and right lower leg muscles tightness and strength-tightness measurement before and after the self stimulates Thai health massage in the school age children, 30 minutes each time: 3 weeks, have statistically significant differences 0.05 in 1st week (TL:0.014, TR: 0.028); 2nd week (TL: 0.007) and 3rd week (TL:0.000, TR: 0.002), (STL:0.000, STR: 0.001).

Leg muscles tightness and strength-tightness measurements were more after than before the self stimulates Thai health massage in the school age children: left leg muscles tightness measurement (TL) 1st week, 2nd week, 3rd week □ before (2.12) and □ after (2.44, 2.52, 2.68 respectively); right leg muscles tightness measurement (TR) 1st week, 2nd week, 3rd week □ before (2.24) and □ after (2.48, 2.44, 2.76 respectively) and strength-tightness measurements 3rd week □ before, after (STL: 2.18, 2.76); (STR: 2.26, 2.82).

Conclusion:

Tightness and strengthening of left and right lower legs muscles before and after the self stimulates Thai health massage in the school age children have significant difference 0.05: in 1st week; 2nd week and 3rd week. The self stimulates Thai health massage in the school age children help tightness and strengthening of legs. The future work suggests both upper and lower legs together.

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FOREIGN TEACHERS' PERCEPTION OF THE EFFECTIVENESS OF COOPERATIVE LEARNING METHODOLOGY IN IMPROVING THAI STUDENTS' LEARNING ATTITUDES TOWARD ENGLISH LANGUAGE

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ABSTRACT

Attitude is a predisposition or a tendency to respond positively or negatively towards a certain idea, object, person, or situation. Attitude influences an individual's choice of action, and responses to challenges, incentives, and rewards. Learning a foreign language is no exception. In fact, attitude has crucial impact on influencing language performance of ESL students. Learners' attitude is a very crucial factor that impact on learning a language. Thai students are generally known to have negative attitude toward learning English language. Therefore, there is a greater need for ESL teachers to phantom a teaching and learning approach aimed at improving students English language learning attitude. Cooperative Learning Methodology is one of the few teaching and learning methodology favored by many ESL researchers as capable of improving students' learning attitude towards English language. This study is set out to explore the foreign teachers' perception of the effectiveness of Cooperative Learning Methodology in improving Thai students' learning attitudes toward English language in Thai schools. Qualitative research approach was used to explore the views of foreign teachers regarding the effectiveness of Cooperative Learning Methodology in improving Thai students' learning attitudes toward English language. The result shows that 100% of the subjects agreed that CLM significantly improved students learning attitudes towards English language. Therefore, this study propose a need for more implementation of Cooperative Learning Methodology in Thai schools as vital means of improving Thai students' learning attitude towards English language.

Keywords: Cooperative Learning Methodology, Attitude

INTRODUCTION

Cooperative learning is an educational approach which aims to organize classroom activities into academic and social learning experiences. The main purpose of CLM is to facilitate positive interdependence among the students. Students must work in groups to complete tasks collectively toward academic goals. Unlike individual learning, which can be competitive in nature, students learning cooperatively can capitalize on one another's resources and skills (asking one another for information, evaluating one another's ideas, monitoring one another's work. Everyone succeeds when the group succeeds. In a cooperative learning environment, learners are encouraged to be in the center of learning and learn together. Learners will not enjoy learning if it happens in isolation (Bruner, Jerome 1996). As such, learners improve their critical thinking and intellectual skills by learning from one another (Ibrahim Mohammad Ali Jbeili 2003).

Effective cooperative learning tasks is academically inspiring, creative, open-ended, and involves higher order thinking tasks. Cooperative learning has also been connected to increased levels of student satisfaction and learning attitude. For Thai students to improve their English language abilities, their learning attitudes need to be encouraged to improve. Weinburgh (1998) believe that attitudes toward learning influence behaviors such as selecting and reading books, speaking in a foreign language. The fact is that, learners' attitudes play an important part in the learning process. Whether or not they will be able to absorb the details of language is all boiled down to the learners' attitudes toward the subject. In other words, to achieve better result in a target language depend not only on intellectual capacity but also on the learner's attitudes toward language learning. This means that learning language should be approached primarily as a social and psychological phenomenon rather than as a purely academic one. As shown in the study conducted by Krongthong Khairiree (2010) problem-based learning and cooperative learning instructional model is helpful in improving students' learning attitude.

One of the reasons why performance of Thai students are poor in English may not be the absence of "teaching" but the ineffectiveness of the way a subject is taught and learned in school. The main blame of poor performance of students is too poor teaching methods, and teachers' inability to vary teaching techniques.

Clearly, no one teaching style or method is suitable for the realization of all teaching outcomes. However, research reports point to the importance of cooperation, collaboration, discussion / verbal interaction and group work.

RELATED LITERATURE

Cooperative Learning Methodology

Academic learning with the help of others is supported by Vygotsky's theory of a zone of proximal. The zone of proximal development is the distance between the child's actual developmental level and his or her potential level of development with the help of adults or in collaboration with more competent peers (Cowie et al., 1994).

In order to ensure that small group processing takes place, teachers allocate time at the end of each class session for each cooperative group to process how effectively members worked together. Groups need to describe what member actions were helpful and not helpful in completing the group's work and make decisions about what behavior to continue or discard. Some of the keys to successful small group processing are allowing sufficient time for it to take place, providing a structure for processing, emphasizing positive feedback, making the processing specific rather than general, maintaining student involvement in processing, reminding students to use their cooperative skills while they process and communicating clear expectations as to the purpose of processing.

The prospective of cooperative learning is obvious to many researchers. Its academic and social advantages are globally recognized (Meixia Ding, Xiaobao, Gerald Kulm 2007). George (2000) defines cooperative learning as the process of acquiring knowledge in a socially packed environment by one or two small groups of students. As such, cooperative learning according to George M. Jacobs & Christopher Ward (2000) is a set of principles and strategies for enhancing learner to learner communication for a common cause.

There are two major theoretical perspectives associated with cooperative learning: motivational and cognitive (Swortzel, 1997). First, because students perceive that their success or failure is dependent upon their ability to work together as a group; students are likely to encourage each other to do whatever to help the group succeed. They are also more likely to help each other with the task(s) at hand. Therefore, cooperative learning increases student motivation to do academic work (Johnson, Johnson, & Holubec, 1986).

The other theory is that cooperative learning helps students acquire critical thinking skills. Because cooperative learning creates a situation in which students must explain and discuss various perspectives, a greater understanding of the material is obtained. Elaborative thinking is promoted because students give and receive explanations more often (Johnson, Johnson, & Holubec, 1986).

Students that are involved in cooperative learning achieve a lot of social and academic benefits. Cooperative classrooms are classes where students group together to accomplish significant cooperative tasks. They are classrooms where students are likely to attain higher levels of achievement, to increase time on task, to build cross-ethnic friendships, to experience enhanced self-esteem, to build life-long interaction and communication skills, and to master the habits of mind (critical, creative and self-regulated) needed to function as productive members of society.

Gocer (2010) noted that students in a cooperative class never felt bored, maintained in-class communication and learned the lessons happily. The goal of an individual student can be influenced by the goal structure of the group he belongs. Once an individual can see the world from the perspective of another person, it will naturally follow that one will see that person in a more positive way. This reduces resentment for others. This is of great importance to teachers and should be encouraged. As learners negotiate meanings among themselves, an atmosphere of friendliness and mutual sharing develops.

Bromley and Modelo (1997) found that cooperative learning helped maximize student learning in language arts instruction. A descriptive study of four teachers who implemented the Kagan Structural Approach during reading and writing instruction demonstrated the following benefits: 1) higher level thinking, 2) better communication between students, and 3) positive social relations.

Moryadee (2001) studied the effects of Cooperative Learning using Student Team-Achievement Divisions (STAD) technique on self-efficacy and English learning achievement of Prathomsuksa 5 students. The subjects were 78 Prathomsuksa 5 students of Samsen Kindergarten School. They were randomly assigned to an

experimental group and a control group, comprising of 39 students in each group. The experimental group studied through STAD and the control group studied through the conventional method. This research employed the pre-test/post-test control group design. All subjects were tested on their self-efficacy and English learning achievement before and after the treatment. The data were analyzed by t-test. The results indicated that the students who studied through STAD have a higher self-efficacy after the treatment than before the treatment at the .01 level of significance. The students who studied through STAD have a higher English learning achievement after the treatment than before the treatment at the .01 level of significance. On the post-test, the students who studied through STAD have a higher self-efficacy and English learning achievement than those students who studied through the conventional method at the .01 level of significance.

METHODOLOGY

The purpose of this study was to explore foreign teachers' perception of the effectiveness of Cooperative Learning Methodology in improving Thai students' learning attitudes towards English language. During the study, students were put in small groups to help each other learn social skills. Cooperative activities were presented to the students from a variety of sources for each day of the ten weeks, while the subjects of this study observed the students' learning attitude toward English language.

Questionnaire form was employed to explore the perception of the subjects of this study. The form was designed to have the subjects reflect on what they have observed when they implemented cooperative learning activities to their students. The questionnaire sought to identify the views of the subjects toward cooperative learning by giving them a ten-item questionnaire on their perceived experiences with Cooperative Learning Methodology. All the items in the questionnaire were designed for a Likert scale response using a four-interval scale of "agree", "strongly agree", "disagree", and "strongly disagree".

1. Participants

The participants were 20 foreign teachers from different schools in Thailand. The participants were selected based on the fact that they are all teachers' license holders and 10 years teaching experience in Thailand.

2. Instruments

The instrument used for this study is the questionnaire form. All the items in the questionnaire were designed for a Likert scale response using a four-interval scale of "agree", "strongly agree", "disagree", and "strongly disagree".

3. Data sources and Analysis

Data for this study was collected through the questionnaire after the ten weeks study to assess foreign teachers' perception and views as they implement cooperative learning activities to their students. Data obtained from the questionnaire form was analyzed in percentage and presented in the form of tables.

RESULTS

To find out the participants' views on Cooperative Learning, the following ten items were analyzed in Table 1.

Table 1
Subjects Perception toward Cooperative Learning Questionnaire Form

Item	Working in pairs and groups	Strongly Agree	Agree	Disagree	Strongly Disagree
A.	Stimulates critical thinking skill of the learners	20 (100%)	0 (0%)	0 (0%)	0 (0%)
B.	More relaxed atmosphere	20 (100%)	0 (0%)	0 (0%)	0 (0%)
C.	Enables learners to help weaker learners in the group	10 (50%)	5 (25%)	5 (25%)	0 (0%)
D.	Learners show more interest in speaking	18 (90%)	0 (0%)	2 (10%)	0 (0%)
E.	Learners asked for help when needed	18 (90%)	2 (10%)	0 (0%)	0 (0%)
F.	Submits class/homework on time	18 (90%)	0 (0%)	2 (10%)	0 (0%)
G.	Increases learners participation	20 (100%)	0 (0%)	0 (0%)	0 (0%)
H.	Reduces learners indiscipline attitude	18 (90%)	0 (0%)	2 (10%)	0 (0%)
I.	Difficult getting learners to actively participate in tasks	0 (0%)	2 (10%)	18 (90%)	0 (0%)
J.	Pair/group work should be continued	20 (100%)	0 (0%)	0 (0%)	0 (0%)

Percentages are indicated in brackets

The above result in Table 1 is merged into two: strongly agree and agree for agree responses, and disagree and strongly disagree for disagree responses and presented in Table 2.

Table 2
Combined Students' Responses

Item	Agree responses	Disagree responses
A	20 (100%)	0 (0%)
B	20 (100%)	0 (0%)
C	15 (75%)	5 (25%)
D	18 (90%)	2 (10%)
E	20 (100%)	0 (0%)
F	18 (90%)	2 (10%)
G	20 (100%)	0 (0%)
H	18 (90%)	2 (10%)
I	2 (10%)	18 (90%)
J	20 (100%)	0 (0%)

Percentages are indicated in brackets

From the results obtained as shown in Table 1 and Table 2, it can be seen that all the respondents agreed that cooperative learning helped to stimulate critical thinking of the learners 20 (100%). All the participants 20 (100%) also agreed that Cooperative Learning Methodology increased learners participation, and more relaxed atmosphere 20 (100%) respectively.

Notably, 18 (90%) of the participants disagreed that it is difficult getting learners to actively participate in tasks during cooperative learning activities. The above results as indicated in table 1 and 2 shows that the following questionnaire items got the highest score at 100%: stimulates critical thinking skill of the learners, more relaxed atmosphere, increase learners participation, and pair/group work should be continued.

CONCLUSION

The findings from this study indicates that learning in cooperation among peers is very beneficial to the learners, as it leads to higher achievement and greater productivity, more caring, supportive, and committed relationships, and greater psychological, health, social competence, and self-esteem of the English language learners. Cooperative learning is capable of improving Thai students' attitude and perceptions toward learning English language. Their ability to discuss and their perception of working with one another in English language class is a greater avenue for the students to inculcate positive learning attitude toward English language. On an important note, cooperative learning involves more than simply assigning students to groups and telling them to work together. To effectively implement cooperative learning in the classroom, ESL teachers need to acquire the proper knowledge of cooperative learning methodology, its features and implementation, and how it functions in an ESL classroom. Effective implementation of cooperative learning tends to completely improve student interactions, more positive attitudes toward English language and greater self-confidence in using the language.

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PERCEPTIONS REGARDING FLOW BREAKING ADVERTISEMENTS OVER SOCIAL MEDIA

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ABSTRACT

The research proposes to explore the perceptions and potential reasons behind those perceptions regarding flow breaking advertisements over social media, for the enlightenment of Marketing industry and filling the gaps between practice and literature, as body of knowledge suggested negative perceptions lead to negative follow up. Three different focus group activities were conducted for this purpose based on referential sampling, keeping the age, gender, marital status and work schedules of the individuals under consideration. Focus group discussions were examined using quasi statistics and such demographics on investigating in detail, showed interesting variations, providing researcher with resilient foundations for bridging the theory with practice. Findings of the study fabricated three categories of perceptions existing regarding flow breaking ads; demarcated as the positive ones which encouraged individuals to observe ad over social media, the negative ones which compelled individual towards skipping/avoiding the ads and the neutral perceptions that played no significant role and led the person rarely notice the ad. The revision astoundingly advocated the neutral category of perceptions regarding flow breaking ads as the most dangerous category for marketers and the other two categories were prescribed as the potential ones. The study further nurtured four broad themes, extracted from the focus group discussions, as the prospective reasons behind the perceptions regarding ads over social media and assisted to operationalize the pertinent sub themes against each main theme. The rationales of examination were presented through rich models and tabulations for clear understanding.

Keywords: Perceptions, Flow breaking advertisements, Marketers, Social Media.