# The Level of Alteration of Ethics Native Food: (A Case of Sarawak, Malaysia)

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## Abstract

Owing to the large forest area and style of living during the pre-independent era most of the Sarawak ethnic natives' traditional food were created, prepared and cooked using the natural resources from the forest. The vast natives' traditional food treasures however are believed to have gradually altered due the waves of modernization. This study empirically investigates the level of alterations of Sarawak ethnic natives' food and it impact to the young generation practices. Three Sarawak major ethnic natives' group of Iban, Melanau and Orang Ulu were self administered surveyed and results revealed that modernization somewhat altered the preparation, equipments, ingredients and the processing methods which slightly affect the uniqueness of ethnic natives' food identity and cultures. The emergence of technological advancement in cooking equipments and utensils, social advancement through economic factors, educational level and lifestyle directly contribute to the alteration processes hence lessening the ability of young generation in preparing their ethnic native food.

Keywords: Alteration, Ethnic Native Food, Sarawak, Malaysia.

## 1. Introduction

Sarawak which also popularly known as Bumi Kenyalang (Land of the Hornbills) is one of the two out of fourteen Malaysian states located in the island of Borneo Sarawak, surrounded with large tracts of tropical rain forest and separated from the Indonesian Kalimantan by ranges of high hills and mountains. With such nature, Sarawak is well known with large array of the tourism products like eco-tourism, cultural tourism, wildlife tourism as well gastronomic tourism (Sarawak Government, 2009). This state is also very popular not only among the Malaysian but to the international tourists as it has a bewildering diversity of culture through over 30 ethnics or indigenous/natives groups (Attila, 2007). Iban, Bidayuh, Malay, Melanau, Chinese, Sebob and Orang Ulu are among the natives groups of who populates this largest state of Malaysia. The Iban formed a large ethnic group with about 30.1 per cent of the total population. The Chinese who generally live in the cities are the second largest ethnic represented around 26.7 per cent, followed by the Malays who constitute 23 per cent of the total population. The Bidayuh represent around 10 per cent and formerly known as the "Land Dayaks", who so enchanted the first White Rajah with their gentleness. Then there are the Melanau represent around 6 per cent of the littorals of Central Sarawak, and the various Orang Ulu groups together make up roughly 5.5 per cent of Sarawak's population. The groups include the Kenyah tribes, and the smaller neighboring tribes of the Kejang, Kejaman, Punan, Ukit, Penan. Lun Bawang, Lun Dayeh, Murut, Berawan and the plateau-dwelling of Kelabits.

According to Bujang (2002), the uniqueness of Sarawak well depend on it ethnic groups. Every native group has their own lifestyle, traditions, language, dialects and also cultures. Iban once the legendary warriors of Borneo and the most feared of the headhunting tribes and dwell in longhouses, a stilted structure comprising many rooms housing a whole community of families however today they are a generous, hospitable and placid people. The Ibans ethnic is renowned for their "Pua Kumbu" (traditional Iban weavings), silver craftings, wooden carvings and beadwork. The first Chinese migrants worked as laborers in the gold mines at Bau district or on plantations. Through their clan associations, business acumen and work ethic, the Chinese organized them economically and rapidly dominated the business and commerce. The Malays on other hand are famed for their wood carvings, silver and brass crafting as well as traditional textile weaving with silver and gold thread (kain songket).

The Melanaus traditionally lived in tall houses but nowadays they have adopted a Malay lifestyle, living in kampong-type settlements and they are reputed as some of the finest boat-builders and craftsmen. The Bidayuhs are well-known for their hospitality and are reputed to be the best makers of tuak, or rice wine. The traditional Bidayuh abode is the "baruk", a roundhouse that rises about 1.5 meters off the ground and the ethnic speaks a number of different but related dialects. The Orang Ulu is artistic people with longhouses elaborately decorated with murals and woodcarvings. They are also well-known for their intricate beadwork detailed tattoos. This tribe can also be identified by their unique music - distinctive sounds from their "sape", a stringed instrument not unlike the mandolin.

Besides those hallmarks, all the natives' possess unique treasures of food. As argue by many researchers, food recognized as being expressive identity, culture and integral component of cultural and heritage tourism (Bessiere, 1998; Cusack, 2000; Ritchie and Zins 1978). In this sense, food is one of the most cultural identities for natives group in Sarawak with each ethnic has their own delicacies. The Iban popular with "tubu" (stems ), "tuak" (alcoholic beverage made from rice wine) and "pansuh" (meat cooked with bamboo), the Melanau with "tebaloi" (Sago palm crackers), "sagu" (extracted from Sago palm) and "umai" (raw fish mixed with lime juice) and Orang Ulu well known with "garam barrio" (Highlands salt), "kikid" (broth), "tengayen" (local young leaves), and "urum giruq" (pudding). In addition, each ethnic group has different styles of preparing, cooking, preserving and eating style of food. The Orang Ulu for instance, using garam barrio to preserve meat, fish and vegetables which is called "mengasam". The Iban are cooking and eating the "lulun", rice which is cooked in bamboo. Historically, owing to the large forest area and style of living during the pre-independent era most of the native groups' traditional food were created, prepared and cooked using the natural resources from the forest like meat of the wild animal, fish, shoots, stems, leaves, roots, barks and many others. These food treasures in turn have contributed to the uniqueness of Sarawak gastronomic culture.

The vast Sarawak ethnic natives' food treasures however are believed to have some alteration, transformation or changes due to the waves of modernization. Theories like Rationalization (Gane, 2002) and Theory of Modernization (Rostow, 1978) clearly relates modernization to alteration, modification and changes and according to Sloan (2001), the changes are caused by many factors. In this sense, the alteration of Sarawak ethnics' native food not only involved the preparation, equipments, ingredients, processing methods but also the eating decorum and others related matters. These alterations in actual fact are uncontrolled and unavoidable as it modernization contributes to the improvement in socio-economics, education, technology, lifestyle and ethnics culture. However, if the changes are involving the whole system from the ways foods are prepared to the style they are served it might give a significant impact to the young and later generation. If this assumption hold true the young and later generations might not know traditional way of preparing the dishes. This in turn will blemish each native's group culinary heritage and directly affects the state tourism as ethnic native food besides other food is acknowledge as part of the tourist experience and featured in a significant amount of promoting Sarawak. Ethnic native food in fact is a window of the identity of the Sarawak cultures and a pleasurable experience for tourists. In line with this notion, this study are looking at; (1) factors influencing the changes in Sarawak ethnics natives food; (2) the level of changes in Sarawak ethnics native food; (3) compare and contrast level of changes in Sarawak ethnics natives food and (4) compare on the impact of generation practices based on age of the respondents.

## 2. Literature Review

## 2.1 Ethnic Food, Modernization and Change

Ethnic food refers to the expression of food in terms of attitudes, values, behaviors and beliefs of a culture that is an expression of its cultural traditions or heritage, religion or national origin (Mora, 1998). The Food Marketing Institute (1998) defines ethnic food as products that a particular ethnic (racial, national) or cultural group favors, such as Mexican, Chinese, Indian, Kosher and many others. Martinez (1998) however argues that food like living things are sensitive or involves changes and modernization through industrialization, urbanization is found to have a major impact on it and strongly link to social change (Cwiertka, 2000). According to Gillette (1997) some behavioral shifts are occurring in the preparation and consumption of food including the traditional food and this largely associated with modernization. Modernization in fact not only affects on daily food practices but also in traditional events, celebration as well as ceremony especially the wedding. Food modification or changes are influenced by the new trends in the consumption which Miele (1999) described as the emergence of a post-modern circuit of food and the rise of a new culture of consumption among the consumers. The convenience concept of food which comprises of three components like time, physical energy and mental energy significantly contributes to the alteration or changes (Buckley, Cowan and McCarthy, 2007). Sheely (2008) identified ten lifestyle issues which drive the demand for convenience foods.

They are the aging population, the changing of household structures, higher females participation in labor force and longer working hours, consumer prosperity and technology ownership, a move toward healthier eating, a desire for new experiences, individualism, declining cooking skills, breakdown of traditional meal times and value for the money. Warde (1999) initially argued that the emergence of convenience food reflects the re-ordering of the time-space in relations to everyday life in contemporary society. Sanzo, del Rio, Iglesias and Vazquez (2004) investigated customers' attitude and satisfaction toward traditional food product (honey) and identified the relationships between three variables: positive consumer attitude towards generic products; the perceived quality of the specific brand consumed; and the satisfaction with the brand and these relationships would become the factors that influence the changes of customers' attitudes.

Modernization is also a structural change that involves technology development and adoption representing materials (Inkeles and Smith, 1974). The production, processing, distribution of food were extensively shaped by modernization (Sobal et al.1998 and Sobal, 1999). Jussaume (2001) posited that the modernization of food production, distribution as well as consumption is encouraged by business and policy makers. Consequently, this scenario has influenced the changes and manipulated the development of regional and global food production systems which not only a means for improving nutritional well-being but promoting the economic growth via expanding consumer demand. Rogers (2005) investigated the matter within the topic of equipments replacement under continuous technological change and identified two types of technological change represented by jumps in improvement with each new vintage arrival and the continuous technological change is represented by incremental improvement with each release of the same vintage. Riley (2005) looked the reflection on the changes that have taken place in the area of food and beverage which he claimed as one of the most complex activities within the area of hospitality.

Technological advances, particularly in the kitchen and the invasion of modern business techniques such as branding and business process engineering have brought new activities in food and beverage production. According to Li, Yin and Saito (2004) few the traditional foods practices are on the verge of being lost but improvements of it through modernization benefit food industries, especially in the poor regions and suggested more of them need some improvements with existence of the modern world. However, they were talking it from healthy eating habits perspectives. Bermudez and Tucker (2004) mentioned food-related practices of older peoples of any ethnic groups provide challenges including the increased in requirements for important nutrients. This is because physiological changes associated with aging and pathological effects of some chronic conditions. They pointed out that eating practices are ruled not only by physiological demands, food availability and choices but also by cultural norms, knowledge and information, and access to food, which is often determined by economic conditions.

From consumer perspective, Wright, Nancarrow and Brace (2000) classified consumers according to their tastes in food and drinks. They argued that consumers' tastes in food sometimes betraying their social origins as they draw more intention and embraced or preferred taste of other food products and claimed those changes are caused by modernization and globalization. White and Kokotsaki (2004) studied on the personal values and the changing patterns of consumption on the Indian food among the English and the Indian descendent in the United Kingdom. There were big influences of culture which establishes how people use food and how does it affects their food intakes. There is a tremendously increment in preferences of English toward Indian food and little modification has been made on the original recipes of Indian foods to suit with European tastes and the foodways that relates to the preparation and consumption as well as the appearance and taste of the food are slightly changing due modernization in term of cooking and serving equipments.

## 3. Methodology

#### **3.1 Sampling and Instrument**

As the intention of this study to understand the phenomenon of changes in native ethnic food and in ensuring the information obtained would be based upon their actual experiences, a self reported experienced through questionnaire survey was chosen as mean of information gathering. Miri district in the North region of Sarawak, Malaysia was chosen as contextual setting as this district is mostly populated with Iban, Orang Ulu and Melanau ethnics groups which are the central focus of the study. Taking into account in differences of ethnics group's profile and educational levels, the questionnaires developed was simple and easy understand with minimum reading and writing. To reduce any possible uncertainty in the questionnaire, Bahasa Malaysia was used as language of the instrument as all ethnics group understand this national language. The questionnaire is divided into five major sections. Section A was designed using nominal scales focuses on the respondents' demographic profile like gender, ethnicity, age and occupation.

Eight questions were used in Section B in identifying factors influencing the changes in the natives/ethnics' food while eleven items were created in Section C which comparing the level of changes natives' food between the ethnic groups. In looking on the impact of the changes to the young generation, six questions were probed in section D. Most items used in Section B, C and D except a few were adopted and modified from Clayton (2001) and Warde (2005) and these three section require respondents to indicate their level of agreement on a five types Likert scale ranging from one (1) with "strongly disagree" to five (5) with "strongly agree".

#### **3.2 Data Collection**

The survey was conducted over six weekends by the researchers to each ethnics group (Iban, Melanau and Orang Ulu). This mean twelve days were spent in data collection process. This was done randomly at shopping complexes, churches, residential area, Iban associations, Melanau associations, Orang Ulu associations around Miri city. Respondents were approached by first asking them a screening question "What is your ethnic group?" Most of the respondents answered their ethnics group and be part of the study sample. Prior to answer the questionnaire, each of the respondents was briefed about the confidentiality and anonymity through the information sheet attached with the questionnaire. With the positive feedback and no obvious problems, 151 questionnaires were able to be collected with 50 respondents were among the Iban, 44 among the Melanau and 57 among the Orang Ulu. The questionnaires were coded and keyed using Social Statistical Package (SPSS) Version 16. The reliability test (Cronbach's alpha) was undertaken on Section B, C and D separately and result showed that the instrument and items used was reliable with coefficient alpha value at 0.88 for section B, 0.86 for section C and 0.76 for section D.

#### 4. Results and Discussion

#### 4.1 Characteristics of the Sample

Out of 151 respondents, 33.1 percent (n = 50) were among the Iban, 37.7 percent (n = 57) Orang Ulu and 29.9 percent (n = 44) were the Melanau. 46.4 percent (n= 70) of were males as opposed 53.6 percent (n= 81) females. Sample also showed that 16.5 percent (n=25) of respondents were between 18-30 years old of age, 26.5 percent (n=40) who were between 31-40 years, 31.2 percent (n=47) in the range of 41-50 years and 25.8 percent (n=39) were above for 50 years old. The highest proportion of the respondents which accounted 33.6 percent (n=55) were among the private sector employees, 33.1 percent (n=50) the government servants, 13.9 percent (n=21) students of higher institutions, 9.9 percent (n=15) were farmers and other and 6.5 percent (n=10) were the businessman.

#### **4.2 Factors Influencing the Alterations**

From descriptive statistic, the magnitude of mean scores indicate the majority of the respondents agreed that modernization influence the alteration of their ethnic natives' food (M= 4.10, item 1). They agreed that the elements of modernization such as technology (M = 3.84, item 2), modern lifestyles (M=3.72, item 3), educations (M = 3.78, item 4), and socio-economy (M = 3.64, item 5) contribute to the alteration. Respondents also believed that modern cooking and serving equipments influence the way of cooking (M = 3.66, item 6) and serving styles (M = 3.86, items 7) of their ethnic native food. Despite these, respondents slightly agree that modern cooking equipments altered the original taste of their ethnic native food. This evident with the mean score (M= 3.37, item 8) given to this item. These results support Yassin (2000) and Mohd Zahari, et.al (2009) that modernization not only involved changes or in the demographic, economic, education but also modified or altered cultures of the community including food.

#### 4.3 Comparison on the Level of Alteration between Ethnics' Groups

One – Way analysis of variance (ANOVA) with Scheffe *post hoc* test was undertaken in examining the differences on the level of alteration between ethnic groups. Out of eleven items, only three were found statistically significant differences. The Melanau ethnic agreed that modern method altered the process of cooking of their ethnic native food (M= 4.04, p = .002) compared to Iban (M = 3.66) and Orang Ulu (M = 3.61). This ethnic also agreed that technology altered the way of cooking of their ethnic native food (M = 4.00, p = .002) as opposed to slightly agreed given by Iban (M = 3.06) and Orang Ulu (M = 3.17). With that feelings, is not surprising that this ethnic group also agreed modern equipments enable their ethnic native food to be cooked in a larger (M = 3.97, p =031 compared M = 3.72 for Iban and M=3.57 for Orang Ulu). These differences are probably occurs owing to Melanau natives' food which is slightly difficult to prepare and require more time to cook compared to the other two ethnic groups. Despite these, all the ethnics group were having similar views on the of rest items. This is evidence when no statistical significance differences appeared on those items.

The three ethnics groups agreed that modernization alters the cooking technique of their ethnic native food (M= 3.84 for the Melanau, M = 3.58 for the Iban and M = 3.63 for the Orang Ulu, p= .249). They agreed that the modern equipments ease the cooking process (M = 3.95 for the Melanau, M = 3.74 for Iban and M= 3.71 for Orang Ulu, p= .175), help to commercialize my ethnic food (M = 3.88 for the Melanau, M= 3.72 for the Iban and M= 3.63 for the Orang Ulu, p= .172) and alter uniqueness of cooking methods of their ethnic food (M = 3.75 for the Melanau, M= 3.54 for the Iban and M= 3.49 for the Orang Ulu, p= .291). In line with these notion, respondents of the three ethnic groups slightly agreed that modern technology alters the identity of their ethnic native food (M = 3.39 for the Melanau, M= 3.38 for the Iban and M= 3.37 for the Orang Ulu, p= .465). In addition, they have the identical view that modern lifestyle of the society (M = 3.91 for the Melanau, M= 3.66 for the Iban and M= 3.72 for the Orang Ulu, p= .175), educational status (M = 3.93 for the Melanau, M= 3.90 for the Iban and M= 3.72 for the Orang Ulu, p= .142) and economy changes of the society alter their ethnic native food (M = 3.84 for the Melanau, M= 3.68 for the Iban and M= 3.72 for the Orang Ulu, p= .055). The overall results of this section analysis signify there were no obvious differences between the ethnic groups believed that modernization through technology, lifestyle, education and economy slightly altered from the process, technique, speed of cooking to the identity of their natives' food.

#### 4.4 Comparison on the Impact of Generation Practices Based on Age

One – Way analysis of variance (ANOVA) with Scheffe *post hoc* test was undertaken in examining the differences on the impact of practices based on respondent's age. For easy understanding, the age range of respondents between 16 to 30 years is named as Young Generation (YG), 31 to 49 years old as Middle Generation (MG) and 50 year old and above as Old Generation (OG). Looking at table, all six items indicate significant differences and Scheffe *post hoc* test show underlying patterns of differences were found between young generation, middle generation and the old generation. Respondents of the young generation (YG) report a greater level of agreement in all related items. This is seen in their reporting themselves as somewhat agreeing that they do not know much of how to prepare most of their ethnic native food (M = 4.35, p = .000) compared to slightly agree given by the middle generation (MG, M= 3.44) and disagree by the old generation (OG, M=2.68). The young generation (YG) also in agreement that they do not bother to cook their ethnic native food as it can easily get in the restaurant (M= 4.29, P =.000), slightly agree given for Middle generation (MG, M= 3.57) as opposed to disagreement rated by the old generation (OG, M=2.48). Similarly, they reported of not interested to cook their ethnic native food as it much time (YG, M= 4.31, P = .000 compared to M = 3.50 for middle generation (MG) and M= 2.51 for old generation (OG).

It is interesting to note that young generation (YG) also attach greater agreement that busy life make them could not careless about their ethnic native food (M= 4.35, P = .000 compare to M = 3.44 for Middle generation (MG) and M = 2.51 for old generation (OG) and commercialization of their ethnic native food make them less interested to learn how to cook it (M= 4.21, P=.000 for young generation (YG) compared to M=3.32 for middle generation (MG) and M = 2.51 for old generation (OG). With this feeling, it is also not surprising to see that young generation (YG) attached greater level agreement that the presence of modern equipments less able them to prepare their ethnic traditional native food (M = 4.29, P = .000 compared to M = 3.57 for middle generation (MG) and M = 2.48 for the old generation (OG). Together, this section analysis explicitly indicate modernization has given significant impact to the young generation and the availability of the ethnic native food through the commercialization plus the social advancement has slightly altered interest of young generation regardless their ethnic groups to learn and to prepare their own native food compared to the middle and old generation.

#### 5. Discussion and Conclusion

Findings of this study clearly indicate that modernization influence the alteration of Sarawak state ethnic natives' food. The elements of modernization such as technology, modern lifestyles, educations, and socioeconomy contribute to the alteration. Not only that, modern cooking equipments and serving equipments directly influence the way of cooking and serving styles and in fact slightly over ruin the original taste of ethnic native food. These alterations not only occur to one but all ethnic groups. In actual fact, the process of modernization is unavoidably as it improved every facets of life and many commentators stated that modernization through the commercialization plus the social advancement slightly lessening interest of young generation of all ethnic groups toward their own native food compared to the middle and old generation. This group could not care less on the effect of the alteration and less interest to learn, prepare and to cook their ethnic foods. Ones actually could not stop them however if this continuously being ignored without any efforts undertaken sooner or later the uniqueness and cultures identity through their native food will be faded and somehow or rather will affect the Sarawak state tourism sector. Some proactive actions therefore should be taken either by individual, communities, ethnic headmen, politicians, non-government associations and the government itself. In retaining and preserving some good elements of the ethnics' native food, every individual or parents should at least play their roles by encouraging and teaching their young kids of how to prepare or get them involved in the preparation of their native food even during the festive seasons and occasions. Ethnic headmen, politicians and non government association are without exception. Talks and events like cooking competition, demonstration of the ethnics' native food and cultural events involving the secondary schools students or young generation could help in boosting the interest. For the local and states government, the campaign of conserving the ethnic native food should continuously be practiced. The existence of the Culture Village is one of the best efforts undertaken in conserving multi ethnic natives' food. Although only a demonstration, but it directly portray the image and educate the local as well as tourists on how the Sarawak multi ethnics groups prepared their traditional food. In sum, the communal efforts from all parties are requires not only for the benefit of the young generation but also to the state tourism despites the waves of modernization.

## References

- Attila, E. (2007). Discovering North Borneo. A travelogue on Sarawak & Sabah by the author-graphic designpublisher. National Library of Australia, Canberra, record ID: 4272798.
- Bermudez, O. I., & Tucker, K. L. (2004). Cultural aspects of food choices in various communities of elders. Food and Nutrition for Healthier Aging, 22-27.
- Bessiere, J. (1998) Local development and heritage: Traditional food and cuisine as tourist attractions in rural areas. Sociologia Ruralis 38(1), 21-34.
- Buckley, M.C., Cowan, & McCathy, M. (2007). "The Convenience Food Market In Great Britain: Convenience Food Lifestyles Segments." Appetite. 49, 600-617.
- Bujang, A.H. (2002). Interpretation (Amendment) Bill: 'Sea Dayaks', 'Land Dayaks' will be dropped while Lun Bawang will no longer be classified as 'Muruts', Sarawak Tribune, 7 May. Retrieved November 4, 2009 from <u>http://www.bidayuh.com/pressrel2002.htm#news17b</u>
- Clayton, A.L. (2001). The technology of food preparation: The social dynamics of changing food preparation styles. A Master thesis, University of New York, United Sates of America.
- Cusack, I. (2000). African cuisines: recipes for nation building? Journal of African Cultural Studies, 13(2), 207-225.
- Cwiertka, K. J. (2000). Encounters and traditions in foodways: Japan and the west. Food Culture, 8-11.
- Gane, N. (2002). Max Weber and postmodern theory: Rationalization versus re-enchantment. New Yolk: Palgrave Publishers
- Gillette, B.M. (1997) Contemporary Chinese Muslims (Hui) remember ethnic conflict: Stories of the late 19<sup>th</sup> century "Hui Uprising" from Xian. Paper presented at the Association for Asian Studies meeting, Chicago, United State of America.
- Inkeles, A. & Smith, D. (1974). Becoming modern: Individual Change in Six Developing Countries. Havard, MA: Harvard University Press.
- Jussaume Jr., R. A. (2001). Factors associated with modern urban Chinese food consumption patterns. Journal of Contemporary China, 10(27), 219–232.
- Li, L. T., Yin, L. J., & Saito, M. (2004). Function of traditional foods and food culture in China. JARQ, 38(4), 213 220.
- Martinez, R. O. (1998). Globalization and the social sciences. The Social Science Journal, 35, 601-613.
- Mieli, M. (1999). Short circuits: new trends in the consumption of food and the changing status of meat. International Planning Studies, 4(3), 373-387.
- Mohd Zahari, M. S., Jalis, M. H., Zulfifly, M. I., Mohd Radzi, S., & Othman, Z. (2009). Gastronomy: an opportunity for Malaysian culinary educators. International Education Studies, 2(2), 66-71.
- Mora, J.K. (1998). Understanding multiculturalism: cultures and values. Retrieved October 18, 2009 from http://coe.sdsu.edu/people/jmora/CulturalValues/
- Riley, M. (2005). Food and beverage management: a review of change. International Journal of Contemporary Hospitality Management, 17(1), 88-93.
- Ritchie, J.B.R. & Zins, M. (1978). Culture as a determinant of the attractiveness of a tourist region, Annals of Tourism Research, 5, 252-267.
- Rogers, L.J. (2005). Equipment replacement under continuous and discontinuous technological change. A Doctoral dissertation, University of Lehigh, United State of America.

Rostow, W. W. (1978). The world economy: History and prospect. Austin TX: University of Texas Press.

- Sanzo, M. J., Rio, A. B., Iglesias, B., & Vazquez, R. (2004). Attitude and satisfaction in a traditional food product. British Food Journal, 105(11), 771-790.
- Sarawak Government Official Portal. (2009). Ethnic groups. Retrieved November 5, 2009 from http://www.sarawak.gov.my/seg.php?
- Sheely, M. (2008). Global adoption of convenience food. American Journal Agro Economic, 90(5), 1356–1365.
- Sloan, E. (2001). Ethnic foods in the decade ahead. Food Technology. 55 (10) 18-21
- Sobal, J. (1999). Food System Globalization, Eating Transformations, and Nutrition Transitions. In: Grew, R. (ed.) Food in Global History. Boulder, CO: Westview Press.
- Sobal, J., Khan, L.K., & Bisogni, C.A. (1998). A conceptual model of the food and nutrition system. Journal of Social Science and Medicine 47: 853-63.
- The Food Marketing Institute (1998), Language of the food industry. Retrieved October 18, 2009 from www.fmi.org/facts\_figs/glossary\_search.cfm?
- Warde, A. (1999). Convenience food: space and time. British Food Journal, 7, 518-527.
- Warde, H. (2005). The interrelationship of education, income, lifestyle factors, and adiposity in the Ontanio food survey. A Master thesis, University of Toronto, Canada.
- White, H., & Kokotsaki, K. (2004). Indian food in the UK: personal values and changing patterns of consumption. International Journal of Consumer Studies, 28(3), 284–294.
- Wright, L. T., Nancarrow, C., & Kwok, P. M. H. (2001). Food taste preferences and cultural influences on consumption. British Food Journal, 103(5), 348-357.
- Yassin, S. M. (1999). Rewang: Perpaduan tulen jiran sekampung [Rewang: pure integration of neighborhood]. Dewan Budaya, 28-29.

No.	Items	n	Mean	SD
			(M)	
1.	Modernization influence the alteration of my ethnic native food	151	4.10	.449
2.	Technology influence the alteration of my ethnic native food	151	3.84	.927
3.	Modern lifestyle influence the alteration of my ethnic native food	151	3.72	.956
4.	Education influence the alteration of my ethnic native food	151	3.78	.735
2. 3. 4. 5.	Socio - economy influence the alteration of my ethnic native food	151	3.64	.921
6.	Modern cooking equipments influence the way of cooking of my ethnic native food	151	3.66	.772
7.	Modern serving equipments influence the style of serving of my ethnic native food	151	3.86	.689
8.	Modern cooking equipments influence the original taste of my ethnic native food	151	3.37	.722

**Table 1:** The Mean Scores for Factors Influencing the Alterations

\*Scales: 1= Strongly disagree, 2= Disagree, 3= Slightly agree, 4= Agree, 5= Strongly agree

No.	Items	Ethnic	n	Mean (M)	S.D.	Sig.	Scheffe post hoc
1.	Modern method alters the process of	Iban	50	3.66	.476	.002	M > I > O
	cooking of my ethnic native food.	Melanau	44	4.04	.526		
		Orang Ulu	57	3.61	.750		
2.	Technology alters the way of cooking my	Iban	50	3.06	.912	.002	M > O > I
	ethnic native food.	Melanau	44	4.00	.823		
		Orang Ulu	57	3.17	1.00		
3.	Modern equipments enable my ethnic	Iban	50	3.72	.729	.031	M > I > O
	native food to be cooked in a larger	Melanau	44	3.97	.628		
	quantity	Orang Ulu	57	3.57	.844		
4.	Modernization alters the cooking	Iban	50	3.58	.730	.249	
	technique of my ethnic native food	Melanau	44	3.84	.833		
		Orang Ulu	57	3.63	.815		
5.	Modern equipments make the cooking	Iban	50	3.74	.599	.175	
	process of my ethnic food easier.	Melanau	44	3.95	.608		
		Orang Ulu	57	3.71	.733		
6.	Modern equipments help to	Iban	50	3.72	.671	.172	
	commercialize my ethnic food.	Melanau	44	3.88	.537		
		Orang Ulu	57	3.63	.770		
7.	Modern equipments alter the uniqueness of cooking methods of my ethnic food.	Iban	50	3.54	.838	.291	
		Melanau	44	3.75	.750		
		Orang Ulu	57	3.49	.9281		
8.	Modern technology alters the identity of my ethnic native food.	Iban	50	3.38	.854	.465	
		Melanau	44	3.39	1.01		
		Orang Ulu	57	3.37	1.04		
9.	Modern lifestyle of the society alters my	Iban	50	3.66	.895	.175	
	ethnic native food.	Melanau	44	3.91	.473		
		Orang Ulu	57	3.61	.959		
10.	Educational status of society alters my ethnic native food.	Iban	50	3.90	.444	.142	
		Melanau	44	3.93	.473	]	
		Orang Ulu	57	3.72	.750	]	
11.	Economy changes of the society alter my	Iban	50	3.68	.844	.055	
	ethnic native food.	Melanau	44	3.84	.428	]	
		Orang Ulu	57	3.46	.965	]	

Table 2: Comparison on the Level of Alteration between Ethnics' Groups

\*Note: Melanau- (M), Iban - (I), 50 Orang Ulu - (O)

**\*\*Scales: 1**= Strongly disagree, 2= Disagree, 3= Slightly agree, 4= Agree, 5= Strongly agree

Table 3: Comparison on the Impact of Generations Practices between Respondents Age

No.	Items	Age	Ν	Mean (M)	Std. Deviation	Sig.	Scheffe post hoc	
1.	I do not know much of how to prepare most of my ethnic native food.	18-30 (YG)	51	4.35	.482	.000	YG > MG > OG	
		31-49 (MG)	59	3.44	.771			
		50-above (OG)	41	2.68	.567			
2.	I do not bother to cook my ethnic native food as I can easily get them in the restaurant	18-30 (YG)	51	4.29	.501	.000		
		31-49 (MG)	59	3.57	.913		YG > MG > OG	
		50-above (OG)	41	2.48	.506			
3.	I am not interested to cook my ethnic native food as it mostly taking much time	18-30 (YG)	51	4.31	.509			
		31-49 (MG)	59	3.50	.817	.000	YG > MG > OG	
		50-above (OG)	41	2.51	.506			
4.	Busy life make me could not careless about my ethnic native food	18-30 (YG)	51	4.35	.522	.000	YG > MG > OG	
		31-49 (MG)	59	3.44	.969			
		50-above (OG)	41	2.51	.506			
5.	Commercialization of my ethnic native food make me less interested to learn how to cook it	18-30 (YG)	51	4.21	.502	.000		
		31-49 (MG)	59	3.32	.775		YG > MG > OG	
		50-above (OG)	41	2.51	.553			
6.	The presence of modern equipments less able me to prepare my ethnic traditional native food	18-30 (YG)	51	4.29	.501			
		31-49 (MG)	59	3.57	.770	.000	YG > MG > OG	
		50-above (OG)	41	2.48	.506			

\*Note: 18-30 years old- Young Generation (YG), 31-49 years old- Middle Generation (MG), 50 and above- Old Generation (OG)

**\*\*Scales:** 1= Strongly disagree, 2= Disagree, 3= Slightly agree, 4= Agree, 5= Strongly agree