

# Nutritional Value of Breakfast Meals, Attitudes, and Interventions Intended for Trainee-Teachers in Developing Favorable Disposition to Breakfast Meals Served at Al-Faruq College of Education, Wenchi-Ghana

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**Abstract:** Breakfast is widely recognised as an important meal for maintaining good eating habits and for providing nutrients. There is a scarcity of research on the attitudes of trainee-teachers about breakfast offered in the Al-Faruq College of Education dining hall. A mixed way of approach was employed (questionnaires and interviews). The nutritional value of four common breakfast foods was compared to the UNICEF's 4-star diet plan. The study looks at the nutritional content of breakfast foods served to trainee-teachers in the Al-Faruq College of Education dining hall, as well as their current attitudes. A self-administered questionnaire was used to collect data from 359 trainee-teachers chosen from the College. Menu for breakfast meals was compared to UNICEF's 4-star plan. Questionnaires were used to measure teacher trainee's attitudes on breakfast eating patterns. The obtained data was processed to determine "likeness or dislike" for breakfast served in the Dining Hall. The biggest positive emotional impact indicated by students was that breakfast patronage may be increased by improving the taste. The hygienic environment and timely delivery of breakfast are other crucial factors in encouraging pupils to eat breakfast. Based on the study's findings, the interviewed hall tutor, quality assurance tutor, and nutritionist recommended solutions were to the breakfast skipping and low patronage.

**Keywords:** Breakfast, Attitude, Trainee-teachers, 4-star Diet Plan, Al-Faruq College of Education

## 1. Introduction

We are what we consume, and so it's important to remember that consuming the right kinds and amounts of food may promote good nutrition and health, as evidenced by people's appearance, productivity, and emotional well-being (FAO, 2018). Breakfast has been defined differently in papers evaluated; multiple bodies emphasized the need for a definition to assist future research aimed at assessing and better understanding the function of breakfast eating in wellbeing, Kleinman RE, Hall S, Green H, et al. (2002).

Despite these cultural variances, there is a high level of consistency throughout cultures in terms of the sorts of foods people choose to eat first thing in the morning, as well as heightened interest in this meal, (Cloake et al., 2017). Breakfast is necessary as the first meal of the day to satisfy hunger and boost pupils' health and cognitive ability. Students' capacity to perform at school is influenced by a variety of factors, including the fact that when students encounter poor food quality, they are more likely to acquire negative attitudes and establish incorrect views about such meals. When learners, on the other hand, consume high-quality, well-balanced meals, they are more likely to acquire good attitudes and build accurate judgments of themselves (Barton BA, Eldridge AL, Thompson D, et al. 2005., Maroto, Snelling & Linck, 2014., Charles Spence, 2017).

Lam and Heung (1998) performed a large survey in Hong Kong to analyze students' foodservice expectations and

satisfaction at several institutions. The quality of the meal, affordability, cleanliness, and variety of food offered were all major factors in influencing consumer satisfaction levels, according to their study of the 292 completed questionnaires. Customers' satisfaction levels and opinions of foodservice providers' performance had a favorable association, according to the findings. In a separate research, El-Said and Fathy (2015) polled 543 students at Egypt's University of Alexandria about their satisfaction with several aspects of food and beverage services, such as food and beverage quality, service quality, and pricing and value. The study found that students were dissatisfied with various service features, and that all service attributes had a substantial and beneficial influence on total student satisfaction. Drawing a parallel to what has been, I defer to Ajzen and Fishbein (1975), who proved that the base of an attitude is taught and created via experience. In this study, attitude was defined as a person's general disposition in terms of "likeness or dislikeness" toward the consumption of breakfast supplied in a school's dining hall within a school's boarding system. The nutritious composition of breakfast menu items at Al-Faruq College of Education is identified, analyzed, and measures for increasing mass consumption are recommended in this study.

## 2. Objective

The objective of the study sought to assess the nutritional content of breakfast meals served trainee-teachers in the dining hall of the Al-Faruq College of Education.

Volume 11 Issue 5, May 2022

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### 3. Methodology

#### Research Design

The research methodology is based on the notion that combining quantitative and qualitative (through questionnaires and interviews) methodologies yields a greater grasp of study problems than either strategy alone (Creswell & Clark, 2007). From research ideas through data collection and analysis, a mixed-method study aligns everyone's skills at each level. The study area was Al-Faruq College of Education located at Lowcost near Droboso a suburb of Wenchi, 2km away from the town center the home town of Dr Kofi Abrefa Busia. It is an hour drive from Sunyani, the Bono Region capital of Ghana.

The research design is premised on the idea that the use of quantitative and qualitative (using questionnaires and interviews) approaches in combination provides a better understanding of research problems than either approach alone (Creswell & Clark, 2007). A mixed-method study coordinates everybody's qualities at each stage, from research questions to data collection and analysis.

Population for the study: the study comprises 359 students, 3 tutors and 1 nutritionist in Al-Faruq College of Education in Wenchi Municipality, in the Bono East Region of Ghana. Sampling technique was a purposive sampling technique. We assumed that breakfast is compulsory so every student is supposed to take part. Three (3) tutors who teach food and nutrition to make sure that the food which is served meets the

quality and quantity needed. Also, 1 nutritionist was used to assist in the nutritional content of the food which is served as breakfast. The schools breakfast was based on the assessment using the 3 food groups and the 4 components of a healthy breakfast. The UNICEF's 4-star diet plan (<https://maternitynest.com/malnutrition-four-star-diet-plan/>) was used as a bench mark to gauge the responses of the participants.

**Table 1:** Demographic Characteristic of Student Respondents

Gender	No. of Respondents	Percentage
Male	130	36.2
Female	229	63.8
Age		
Below 19	14	3.9
20-25 years	231	64.3
26-30 years	114	31.8
Above 30 years	0	0
Education	%	
First year trainee-teachers	90	25.1
Second year trainee-teachers	102	28.4
Third year trainee-teachers	167	46.5

Table 1 shows the distribution of respondents according to gender and age of the sampled students. The study's respondents constituted both male and female students. Out of 359 students who took part in the study, majority were females while few were males.

### 4. Results

**Table 2:** Nutritional content of breakfast meal served at Al-Faruq College of Education

	Monday Koko & bread	Tuesday Oblayo & milk	Wednesday Millet koko & bread	Thursday Rice porridge & bread	Friday Millet koko & bread	Saturday Oblayo & milk	Sunday Tea bread
<b>Staple</b>	Corn & bread	Corn	Millet Bread	Rice bread	Millet bread	Corn bread	Bread
<b>Animal protein</b>	Nil	Milk	Nil	Nil	Nil	Milk	Egg
<b>Legume &amp; seed</b>	Nil	Nil	Nil	Nil	Nil	Nil	Cocoa
<b>Fruit &amp; vegetable</b>	Nil	Nil	Nil	Nil	Nil	Nil	Nil
<b>Star</b>	1 star	2 star	1 star	1 star	1 star	2 star	3 star

### 5. Discussion

Table 1 show the gender and age distribution of responders among the sampled pupils. Male and female students were among the study's participants. The majority of the 359 students that participated in the study were female. As a result, the distribution reveals a gender imbalance in favor of female students at the college. This meant that women are more likely to enroll in colleges of education than men; this statistic is given credence by (Ministry of Gender, Children and Social Protection, 2014, p. 10).

In terms of age distribution, the bulk of the students (231 respondents) were between the ages of 20 and 25, with just 14 respondents under the age of 19. This means that the trainee-teachers in the Al-Faruq College of Education's various programs are young adults who have control over their food choices, as well as when and how they eat it. If trainee-

teachers are not properly educated about breakfast as an essential meal of the day and acquire a favorable attitude toward its eating at this point, they may develop obesity, ulcers, diabetes, and other health problems. Breakfast eating has a "significant influence on the overall nutritional adequacy" of pupils, according to Nicklas, O'Neil, and Myers (2004, p.35). Nicklas et al. (2004) were of the view; people who did not consume breakfast were at an increased nutritional risk because the nutrients that were not consumed during breakfast were not remarkably replaced at later meals (Murphy, 2007).

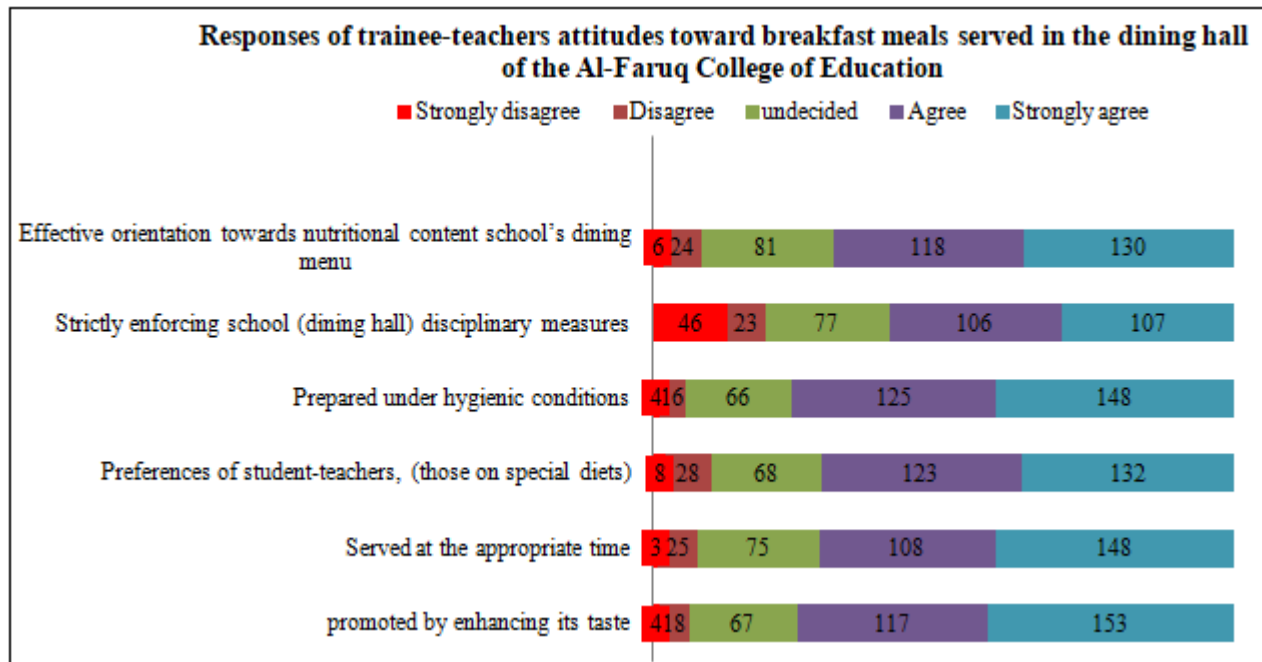
According to Table 2, above four of the seven morning meals supplied are 1 star meals (staples), two are 2-star meals (staples and animal protein), and one is a 3-star meal. There is no fruit or vegetables offered, and tea is not considered a food source since it includes tannins, which hinder iron absorption. Using the 4-star diet guide, it is possible to infer that the diet

quality of the school breakfast meal is mostly energy enough, but nutritionally deficient since it lacks the protective sources of food, which are fruits and vegetables.

Similarly, a staple dense meal with decreased dietary fibre intake predisposes students to high blood glucose levels over a long period of time and lead to the development of type2 diabetes mellitus (Ozougwu et al., 2013).

**Table 2: Questionnaire Responses by trainee-teachers (Quantitative Data)**

No.	Questionnaire Item on Interventions that will help trainee-teachers develop positive attitudes toward breakfast meals served in the dining hall of the Al-Faruq College of Education	Strongly Disagree 1	Disagree 2	Undecided 3	Agree 3	Strongly Agree 5
1	Breakfast consumption in schools can be promoted through effective orientation regarding the nutritional content of the school's dining menu.	6 (1.7%)	24 (6.7%)	81 (22.6%)	118 (32.9)	130 (36.2%)
2	Breakfast consumption in schools can be promoted by strictly enforcing school (dining hall) disciplinary measures.	46 (12.8%)	23 (6.4%)	77 (21.4%)	106 (29.5)	107 (29.8%)
3	Breakfast consumption in schools can be promoted by ensuring that it is prepared under hygienic conditions.	4 (1.1%)	16 (4.5%)	66 (18.4%)	125 (34.8)	148 (41.2%)
4	Breakfast consumption in schools can be promoted by considering the preferences of trainee-teachers, especially those on special diets.	8 (2.2%)	28 (7.8%)	68 (18.9%)	123 (34.3)	132 (36.8%)
5	Breakfast consumption in schools can be promoted ensuring that food is served at the appropriate time.	3 (0.8%)	25 (7%)	75 (20.9%)	108 (30.1)	148 (41.2%)
6	Breakfast consumption in schools can be promoted by enhancing its taste.	4 (1.1%)	18 (5%)	67 (18.7%)	117 (32.6)	153 (42.6%)



**Figure 1: Responses of trainee-teachers attitudes toward breakfast meals served in the dining hall of the Al-Faruq College of Education, Wenchi, Ghana.**

Table 2: Trainee-teachers' developed attitudes toward breakfast meals

In table 2, some of the sampled believed that consumption of breakfast meals could be improved through the promotion of effective orientation regarding the nutritional content of the school's dining menu by expressing strongly disagreement (1.7%), disagreement (6.7), agreement (32.9%) and strongly agreement (36.2%), while 22.6% remained undecided.

On the issue of trainee-teachers' belief that strictly enforcement of school (dining hall) disciplinary measures can help promote their consumption of breakfast meals served in the College dining hall, 12.8% strongly disagreed, 6.4% disagreed, 29.5% agreed and 29.8% strongly agreed, whereas 21.4% remained undecided.

In respect of the sampled respondents' belief that ensuring breakfast is prepared under hygienic conditions can help promote massive consumption of the meals, the participants expressed 1.1% strongly disagreement, 4.5% disagreement,

34.8% agreement and 41.2% strongly disagreement, with 18.4% remaining undecided.

With respect to respondents' belief that breakfast consumption in schools can be promoted by considering the preferences of trainee-teachers, especially those on special diets, the sampled participants expressed strong disagreement (2.2%), disagreement (7.8%), agreement (34.3%) and strong agreement (36.8%), whereas 18.9% remained undecided.

Regarding trainee-teachers' belief that breakfast consumption in schools can be promoted by ensuring that food is served at the appropriate time, 0.8% strongly disagreed, 7% disagreed, 30.1% agreed and 41.2% strongly agreed, with 20.9% remaining undecided.

On the issue of trainee-teachers belief that breakfast consumption in schools can be promoted by enhancing its taste, the study participants strongly disagreed (1.1%), disagreed (5%), agreed (32.6%) and strongly agreed (42.6%), while 18.7% remained undecided.

Nutritional content of breakfast meals served trainee-teachers in the dining hall of the Al-Faruq College of Education and the interventions will help trainee-teachers develop positive attitudes toward breakfast meals served in the dining hall of the Al-Faruq College of Education. Breakfast, served in the college's dining hall per the attached menu can be described as one that does not meet the requirement of a standard breakfast for a healthy adult. The breakfast provides little or no source of lean protein (from animal and plant), B vitamins and mineral as well all fiber. It is largely a breakfast containing refined sources of grains (about 70% refined carbohydrates) contrary to (Nicklas, Bao, Webber, & Berenson, 1993). This study agrees with what Nicklas et al. (1993) indicates that once breakfast is skipped, others meals of the day does not compensate for the lost breakfast benefits. This usually results to rampant snacking on high fat dense diets which increases exposure to increased cholesterol levels compared with persons who consume breakfast (Resnicow, 1991). furthermore, skipping breakfast interfered with cognitive and learning in persons who are nutritionally at risk albeit its consumption improves school attendance (Pollitt & Mathews, 1998) This suggests that missing breakfast is linked to habits that harm adults' health, and that skipping breakfast may have an impact on lecture attendance, as well as the cognitive and learning processes. This does, however, indicate that students who eat the school breakfast have a better probability of attending lectures on time and with improved learning, however other elements such as attention may be harmed due to the nutritionally deficient quality of the meal, particularly with regard to iron. Iron is a key component of hemoglobin, the material in red blood cells that transports oxygen from our lungs to our body's tissues and cells, allowing us to generate energy. As a result, exhaustion, fatigue, and lack of attention are the first symptoms of insufficient body iron levels. And these symptoms have an adverse impact on an individual.

When the question categories are compared (see Figure 1), the most favorable emotional influence (attitude) reported by trainee-teachers as having the most powerful emotional sway in increasing low patronage is enhancing taste (153/42.6 %), followed by both hygienic conditions and timely presentation of food (148/41.2%). The data set with the highest negative influence (strongly disagree) to increasing breakfast patronage is strictly implementing school (dining hall) disciplinary actions, i.e. 46. (12.8 %).

### **Interview Responses by Tutors and key recommendations**

The objective of the study sought to propose some interventions that will help trainee-teachers develop positive attitudes toward breakfast meals served in the dining hall of the Al-Faruq College of Education by answering the question: "What type of intervention will help trainee-teachers develop positive attitude towards breakfast meals served in the dining hall of the Al-Faruq College of Education?"

### **Hall Mistress (tutor "B")**

The majority of the school's messages and information will be delivered to students in the dining hall. When trainee-teachers' minds are conditioned in this way, the majority of information is presented there. So, if dining hall officials plan a student orientation, I believe there will be a large turnout. Aside from that, dining hall management should make it a practice to educate trainee-teachers about any changes or information in the dining hall. If food is going to be delayed, for example, it will surely affect all other factors, thus the kitchen staff should contact the dining hall tutor, who will then inform the dining hall prefect, who will then inform the entire student population. If this information channel is successful, things will improve.

Once again, the dining hall environment should be pleasant at all times. Expect no students to come to your dining hall if it resembles that of Al-Faruq College of Education. A complete clean-up of the dining hall is necessary to make the atmosphere more inviting.

### **Quality assurance Tutor "C"**

To assure enormous patronage, the morning menu quality should be improved. The dining hall at Al-Faruq should be kept clean and in good working order. To accommodate the trainee-teachers, future plans should include the construction of a considerably larger dining hall. The Student Representative Council should meet with the school administration.

### **Nutritionist**

Variety in meals is essential in meeting nutrient requirement especially Iron. Nutritionally adequate meals do not have to be expensive. Students should be engaged and involved in the menu development process. The presentation of the food and making the entire meal time an exciting one will make student want to patronize it. An example is having prefects or male students serve meals in a particular day.

## 6. Conclusion

It is therefore, appropriate for school administrators and managers to appreciate the various factors that occasion the development of students' attitudes in order to fill the gaps created by them. This can be done through orientation, intensive education and research. These interventions, among others have the potential of assisting students develop positive attitudes towards the meals served at the dining hall of the school boarding system.

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