



UNIVERSITY OF
EDUCATION, WINNEBA

TH
CONGREGATION
FIRST SESSION

**Research &
Publications**

**JANUARY,
2024**



UNIVERSITY OF
EDUCATION, WINNEBA



***Research &
Publications***

BRIEF HISTORY

The University of Education, Winneba (UEW) was established in September, 1992 as a University College under PNDC Law 322. On 14th May, 2004, the University of Education Act, (2004) Act 672 was enacted to upgrade the status of the University College of Education of Winneba to the status of a full University.

The University College of Education of Winneba brought together seven diploma awarding colleges located in different towns under one umbrella institution. These colleges were the Advanced Teacher Training College and the National Academy of Music, all at Winneba; the School of Ghana Languages, Ajumako; the College of Special Education, Akwapim-Mampong; the Advanced Technical Training College, Kumasi; and the St. Andrews Agricultural Training College, Asante-Mampong.

By enactment of the Akenten Appiah Menka University of Skills Training and Entrepreneurial Development Act (2020) Act 1026, the Kumasi and Asante-Mampong Campuses have ceased to be satellite campuses of UEW.

MISSION

To train competent professional teachers for all levels of education as well as conduct research, disseminate knowledge and contribute to educational policy and development.

VISION

To be an internationally reputable institution for teachers education and research.

CORE VALUES

- Academic Excellence
- Service to Community
- Good Corporate Governance
- Judicious Utilization and Management of Funds
- Gender Equity and Social Inclusiveness
- Teamwork and Partnerships
- Development
- Positive Work Attitude
- Environmental Responsibility

SPECIAL STATUS AND MANDATE

The University is charged with the responsibility of producing professional educators to spearhead a new national vision of education aimed at redirecting Ghana's efforts along the path of rapid economic and social development.

The University of Education, Winneba is expected to play a leading role in the country's drive to produce scholars whose knowledge would be fully responsive to the realities and exigencies of contemporary Ghana and the West African Sub-region.

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FOREWARD

In the dynamic realm of academia, the pursuit of knowledge is a journey that transcends boundaries, influences policies, and shapes the future. Guided by visionary leadership, the University of Education, Winneba (UEW) stands ready to undertake a remarkable journey, aiming steadfastly for unparalleled global excellence in research.

This visionary approach amplifies the university's steadfast dedication to cultivating a culture centered around research. By highlighting the symbiotic relationship between research, teaching, and policymaking, UEW is steering a path that promises not just academic excellence, but also profound societal influence.

The establishment of UEW as a formidable global entity, fortified by research consultancies and bolstered by internal support, signifies a transformative stride in higher education. As UEW meticulously aligns its strategies with both national and global educational imperatives, the university community is invigorated with a renewed sense of purpose and possibility.

This compendium of research and publications emanating from UEW for the 2022-2023 academic year stands as a testament to the institution's dedication to excellence, innovation, and transformative change. It encapsulates the spirit of collaboration, the pursuit of knowledge, and the relentless quest to shape educational paradigms.

As we navigate this academic journey, guided by established policies and propelled by a shared vision, UEW is poised to redefine its legacy. The journey towards becoming a research powerhouse is not just a pursuit of institutional glory but a collective endeavour to illuminate pathways, inspire minds, and catalyse change.

In this pursuit of excellence, I invite you to immerse yourself in the insightful research and thought-provoking publications presented herein. Together, let us champion the transformative power of research and propel the University of Education, Winneba, to new heights of global eminence.

Prof. Stephen Jobson Mitchual, PhD
Vice-Chancellor
University of Education, Winneba



SCHOOL OF BUSINESS

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SCHOOL OF BUSINESS

ARTICLES IN JOURNALS

Owusu- Bempah, E., Opoku, D., & Sam-Mensah, R., (2022). Gender differences in e-learning success in a developing country context: a Multi Group Analysis. *Euro pean Journal of Education and Pedagogy*, 3(4), 61- 69. DOI: <https://doi.org/10.24018/ejedu.2022.3.4.410>

Abstract

The purpose of this study was to evaluate gender differences in the variables that influence the adoption of e-learning in an academic environment. Literature on gender differences in e-learning adoption and usage seems to be very limited and hazy. Hence, the need for this research study. The study was based on the hypothesis that factors such as system quality, information quality, and service quality influence the behavioural intention to use an e-learning platform (Moodle LMS), which in turn influences actual Moodle usage. The study made use of the SmartPLS application. The Structural Equation Model (SEM) technique was used to analyse the interactions between the components of the proposed model from the viewpoint of 540 responses. Both males' and females' LMS usage intentions were shown to be significantly influenced by system quality and service quality. In addition to this finding, information quality showed a statistically significant influence on males' LMS use intentions while not affecting the LMS use intentions of females. This study contributes to the dearth of research that exists on gender differences in the adoption of e-learning in developing nations that have placed a strong emphasis on the use of e-learning technologies. E-learning adoption theory is bolstered by this study, which empirically confirms that the DeLone and McLean model is applicable in a new setting. Keywords: Developing Country, E-learning, Gender Difference, MultiGroup Analysis, Moodle.



FACULTY OF SOCIAL SCIENCE EDUCATION

ARTICLES IN JOURNALS

Emmanuel Ofori Ntim & Thomas Prehi Botchway. (2023). Ghana Beyond Aid: A Bargaining Chip for Draconian Economic Policies in Ghana. *The African Review*, 1-33, 50(1), 1-33. DOI: <https://doi.org/10.1163/1821889X-BJA10073>

Abstract

This article evaluates the austere economic policies implemented by the Akufo-Addo-Administration using the Ghana Beyond Aid vision as a guarantee. For a state that virtually depends on the benevolence of the external world for its economic growth and national development, the enactment of policies to wean its political economy from the generosity of industrialized nations and multinational institutions is not only politically expedient but also socially gratifying. Nonetheless, instead of the government concentrating on formulating pragmatic policies that form the niches of the Ghana Beyond Aid agenda with public support, it has rather taken a uniquely detested trajectory of dedicating little attention to the vision in pursuit of policies that has lost touch with the public, but which the vision is occasionally cited as the bargaining chip. This article examines these political nuances using the case study strategy. The paper argues that while it is prudent to implement policies towards the attainment of the Ghana Beyond Aid vision, the political leadership should be guided by public opinion and consensus building to reduce the degree of adversities posed by these policies. The study also makes a case for policy initiatives and strategies to make the beyond aid agenda feasible.

Tweneboah-Koduah, D.; Arah, M. L., & Botchway, T. P. (2023). Globalization, renewable energy consumption, and sustainable development. *Cogent Social Sciences*, 9(1), 1-21. DOI: <https://doi.org/10.1080/23311886.2023.2223399>

Abstract

Since the launch of the Brundtland Report in 1987, developing countries continue to face problematic trade-offs between balancing the current use of natural resources and how to minimize the level of harm to their future use. This paper examines how renewable energy consumption and globalization affect sustainable development

for a sample of 24 sub-Saharan African countries (SSA) between 1990–2015. Nevertheless, the evidence from the panel ARDL/PMG estimation shows that renewable energy consumption stimulates sustainable development. However, the heterogeneous analysis between our variables reveals that renewable energy is likely to exert a greater impact on countries that have made modest progress in sustainable development agenda, these countries still need to significantly reduce the consumption of non-renewable energy sources in their total energy mix. We further observe that the integration of global economies and society is relevant for sustainable development. Therefore, since SSA countries have a huge potential for renewable energy including solar power, wind, hydro power, biomass, and geothermal energy, global partnerships in the areas of green policy innovation and research are critical. More importantly, the green partnerships should aim at facilitating unfettered access to clean energy by ensuring that the use of renewables is less expensive than fossil-based energy sources. This is likely to smoothen the path to achieving sustainable development goals in SSA.

Doku, I, Theophilus, T.E.& Essah, N.K. (2022). Bilateral climate finance and food security in developing countries: A look at German donations to Sub-Saharan Africa. Food and Energy Security, 3(412), 1-15. DOI: <https://doi.org/10.1002/>

Abstract

This study seeks to assess whether the German bilateral climate finance (GCF) geared toward the agriculture sector of 35 SSA countries is helping achieve food security. In measuring food security, the study employed principal component analysis to generate an index for all four food security dimensions proposed by FAOSTAT-food availability, access, stability, and utilization. A general composite food security index was also generated. System-GMM was used to estimate the influence of GCF on all the food security components. The findings show that GCF improves food availability and general food security in SSA, but government expenditure is inadequate to do so. It was also found that agricultural technology or capacity moderates the effect of GCF on food availability and overall food security. Based on the findings of the study, it is clear that bilateral climate finance flow invested in agricultural technology coupled with an increase in government agricultural expenditure from the current 6% to 10% as proposed by the Malabo declaration will put SSA on a path to achieving food security. It is recommended that SSA countries deepen incentives to attract FDI inflows to the region due to its role in improving food security via food access.

KEYWORDS

Food security, German bilateral climate finance, principal component analysis, Sub-Saharan Africa.

Ababio, A.G., Osei-Fosu, A.K., & Dramani, J.B. (2023). Religion, social capital and poverty in Ghana: Correlations and explanations. *International Social Science Journal*, 73(248), 559-581. DOI: <https://doi.org/10.1111/issj.12408>

Abstract

Religion is a key source of social capital for poverty reduction. This study used nationally representative data from households (N = 16,772) in Ghana to determine the association between religious affiliation and the incidence of poverty. Descriptive statistics, multilevel mixed-effect logistic model and nearest neighbour matching estimator were used to analyse the data. We found that relative to the unaffiliated, except affiliation with Other Christian and Other religions, affiliation with Catholic, Protestant, Pentecostal/Charismatic, Islam and Ahmadiyya is negatively associated with the incidence of absolute poverty. In urban areas, relative to those who belong to no religion, except affiliation with other religions, affiliation with all the major religious denomination is negatively associated with the incidence of absolute poverty. The study also found that, compared to all other denominations, affiliation with Ahmadiyya and Catholic is positively associated with the incidence of poverty in Ghana. We concluded that in Ghana, religious affiliation reduces the odds of falling into poverty for those who live in urban areas, although some religious norms and values could expose households to poverty. The study recommends that the introduction of faith tax on religious denominations and conditional transfer programmes could help maximize the effect of religious affiliation on poverty reduction in Ghana.

Odame, P. K., Amoako-sakyi, R. O., Abane, A., & Mensah, M. N. (2023). Alternative travel mode for commuters with disability in Accra: The lived experiences of Uber and taxi users. *Case Studies on Transport Policy*, 11(1), 100968. DOI: <https://doi.org/10.1016/j.cstp.2023.100968>

Abstract

This paper explores the alternative travel mode choice among persons with disabilities (PWDs) in the city of Accra. With a limitation in the ownership of private cars among PWDs, public transport plays a critical role in connecting them to various life enhancing opportunities. Despite its importance, the unresponsive nature of Ghana's public transport services and poor attitudes towards the disability community have induced the need for a reliable alternative travel mode hence the need to examine factors that influence this trend in Accra. Using a qualitative research design, this study engaged 28 visually and 22 physically impaired participants through convenience sampling and snowballing. Findings revealed that the lower fees charged for conventional public transport services informed their patronage

but the ease, convenience, exclusive services, and the friendly reception from Uber drivers remained the key attraction for the increasing trend in their patronage of such services. Unfortunately, higher fees associated with Uber services translated to few trips and fewer social engagements. The study recommends an overhaul of Ghana's public transport system by ensuring strict compliance to the transport provision of Ghana's Disability Act given its potential to increase PWDs' travel options as seen in the enjoyment of lower transport fares.

Agyemang, K. K., Odame, P. K., Obilie, R., Mensah, E. A., & Abane, A. M. (2023). Perception of commuter rail transit riders/users of train services on the Accra-Nsawam Corridor. *Urban, Planning and Transport Research*, 11(1), 12-26. DOI: <https://doi.org/10.1080/21650020.2023.2204920>

Abstract

Commuter trains are a popular mode of transportation among low-income earners in Ghana. However, due to the economic turmoil of the 1970s, the government struggled to invest in and manage this travel option effectively. With the increasing trend towards mass commuter services worldwide, this study aimed to examine how commuters perceive the quality of railway services in Ghana, using the Accra Nsawam corridor as a case study. The study involved an on-board survey of 430 passengers using questionnaires. The results showed that factors such as speed, punctuality, safety, comfort, and improved customer care were significant predictors of commuters' preference for commuter services. However, variables such as advanced technology and ticketing systems were found to be less important. The study recommends expanding rail services to other parts of the country while simultaneously improving technology.

Odame, P. K., Sam, E. F., Amoako-Sakyi, R. O., & Arko, B. (2023). State of public transport services to Ghana's disability population: Lessons from public transport operators in the Accra Metropolitan Assembly. *Social Sciences & Humanities Open*, 7(1), 100413. DOI: <https://doi.org/10.1016/J.SSAHO.2023.100413>

Abstract

Access to public transport services is crucial to the enjoyment of various life-enhancing opportunities by persons with disabilities (PWDs). However, the attainment of such services is confronted with varying levels of difficulties due to the non-conformity between transport service delivery and PWDs' needs. While many players like transport operators and vehicle manufacturers contribute to the delivery of transport

services, this study examines the responsiveness of public transport operators to the travel needs of commuters with disabilities in Accra. Using a qualitative research approach, 24 public transport operators were conveniently sampled from 3 popular and busy transport terminals in Accra, the capital city of Ghana. Thematic content analysis was employed using key constructs that emanated from the transcripts. The findings reveal that none of the public transport providers/operators had any knowledge of Ghana's Disability Act of 2006 and its transport provision. By this, all activities tailored to the disability population were generally informed by common sense despite refuting calls to acquire disability-friendly vehicles or support systems. It is recommended that sensitization on the transport provision of Ghana's Disability Act should be heightened by the Ministry of Transport given its ability to improve transport services to the disability population.

Kursah, M., B., (2023). Satellite Image Analysis of Thermal Comfort for a Sustainable Urban Ecology of Winneba, Ghana. *Urban Climate*, 52, 101685. 10.1016/j.uclim.2023.101685.[http:https://www.sciencedirect.com/science/article/abs/pii/S2212095523002791](https://www.sciencedirect.com/science/article/abs/pii/S2212095523002791). ISSN:2212-0955

Abstract

To mitigate thermal heat effects for a sustainable urban living environment through planning and interventions, studies on land surface temperature (LST) in urban settings are crucial. Thus, the relationship between LST and surface landscape must be established to accurately assess the impacts of surface temperature changes for planning purposes. This will help gain knowledge about the spatial concentration of the heat effects and to design practical needs of urban planning. The study aimed to analyse and reveal the spatial dynamics of LST and its statistical relationship with two normalised satellite indices using Landsat satellite data. The Landsat-derived LST is validated using the MODIS surface temperature data. It also mapped the heat spots (HS) and evaluated the ecological evaluation index and thermal comfort using the thermal field variance index (TFVI). The results showed spatial variation in LST even within the built-up areas due to heterogeneity in the surface characteristics. Thus, localised heat islands (HIs) exist within short distances. The analysis established an inverse correlation for LST-NDVI and a direct correlation for LST-NDBI. The vegetation and water surfaces served as important heat reduction sinks while heavily built-up areas and the hardened-clayey bare surfaces served as heat-enhancing sources. More than half (52.80%) of the study area enjoys an excellent (48.57%) and good (4.23%) ecological evaluation index, indicating excellent to good thermal comfort. Much of these areas are in the urban periphery. Also, more than one-third (38.96%) enjoy the worst (34.85%) and worse (4.11%) ecological

evaluation index and thus high thermal discomfort. Identifying these HS areas and evaluating the thermal comfort will help the planners and decision-makers to fully evaluate the thermal consequences of different landuse or land development scenarios and therefore improve the scientific basis of future planning and regulations.

Sam, E., F., Odame, P., K., & Amoah-Nuamah, J., (2023). Predictors of Distractive Activities to Walking in Accra, Ghana, Urban, Planning and Transport Research, 11, (1), 2220574. <https://doi.org/10.1080/21650020.2023.2220574>. <http://www.tandfonline.com/doi/full/10.1080/21650020.2023.2220574>

Abstract

Walking is a fundamental mode of transport for many people globally, with immense health and environmental benefits. However, increased walking is associated with an increased risk of road traffic crashes and injuries, especially where traffic enforcement is poor, and pedestrians could easily be distracted. Despite this, a plethora of evidence exists on driver distraction; however, there is a dearth of evidence of pedestrian distraction (i.e. distracted walking), particularly in Africa. This paper uses a quantitative methodology to examine the predictors of distractive activities to walking in Accra, Ghana. The study surveyed 400 pedestrians within Accra's Central Business District (CBD). A questionnaire was deployed via Kobo Toolkit and Jamovi was used in analysing the data. The study observed that three of the top four distractive activities to walking were digital devices-related (e.g. the use of mobile phones). We found that listening to music, making, receiving phone calls, and conversing with other people while walking are the main distractive activities. The binary logistic regression model found sex, age, level of education, occupation, reasons for walking, weekly time for walking and time for common trips as significant predictors of distractive activities to walking.

Odame, P. K., Sam, E. F., Amoako-Sakyi, R. O & Arko, B (2023). State of public transport services to Ghana's disability population: lessons from public transport operators in the Accra Metropolitan Assembly. *Social Sciences & HumanitiesOpen*, 7, (100413), <https://doi.org/10.1016/j.ssaho.2023.100413>. ISSN: 2590-2911

Abstract

Access to public transport services is crucial to the enjoyment of various life-enhancing opportunities by persons with disabilities (PWDs). However, the attainment of such services is confronted with varying levels of difficulties due to the non-conformity between transport service delivery and PWDs' needs. While many players like transport operators and vehicle manufacturers contribute to the delivery of transport services, this study examines the responsiveness of public transport operators to the travel needs of commuters with disabilities in Accra. Using a qualitative research approach, 24 public transport operators were conveniently sampled from 3 popular and busy transport terminals in Accra, the capital city of Ghana. Thematic content analysis was employed using key constructs that emanated from the transcripts. The findings reveal that none of the public transport providers/operators had any knowledge of Ghana's Disability Act of 2006 and its transport provision. By this, all activities tailored to the disability population were generally informed by common sense despite refuting calls to acquire disability-friendly vehicles or support systems. It is recommended that sensitization on the transport provision of Ghana's Disability Act should be heightened by the Ministry of Transport given its ability to improve transport services to the disability population.

Sam, E. F., Odame, P. K., & Amoah-Nuahman, J. (2023). Predictors of distractive activities to walking in Accra, Ghana. *Urban, Planning and Transport Research*, 11, 102332. DOI: <https://doi.org/10.1080/21650020.2023.2220574>

Abstract

Walking is a fundamental mode of transport for many people globally, with immense health and environmental benefits. However, increased walking is associated with an increased risk of road traffic crashes and injuries, especially where traffic enforcement is poor, and pedestrians could easily be distracted. Despite this, a plethora of evidence exists on driver distraction, however, there is a dread of evidence of pedestrian distraction (i.e., distracted walking), particularly in Africa.

This paper uses a quantitative methodology to examine the predictors of distractive activities to walking in Accra, Ghana. The study surveyed 400 pedestrians within Accra's Central Business District (CBD). A questionnaire was deployed via the Kobo Toolkit and Jamovi was used in analysing the data. The study observed that three of the top four distractive activities to walking were digital devices-related (e.g., the use of mobile phones). We found that listening to music, making, receiving phone calls, and conversing with other people while walking are the main distractive activities. The binary logistic regression model found sex, age, level of education, occupation, reasons for walking, weekly time for walking and time for common trips as significant predictors of distractive activities to walking.

Article(s)/ Chapter(s) in an Edited Book

Odame, P. K., & Boateng, E. N. K., (2022). Leveraging Spatial Technology or Agricultural Intensification to Address Hunger in Ghana. In P. Solis & M. Zeballos Open Mapping towards Sustainable Development Goals. Springer Nature. DOI: https://doi.org/10.1007/978-3-031-05182-1_3.

Abstract

Youth Mappers are using open geospatial tools in support of initiatives seeking to achieve SGD 2 Zero Hunger and SDG 1 No Poverty in Northern Ghana. Students and researchers designed survey questions and a field data collection workflow using simple but cost-effective technology to catalogue a database of farmers, properly demarcate farm sizes, and give farmers, in particular impoverished women, the opportunity to project farm yields and increase the efficiency of their output.

Kursah, M. B., Biniyam, S. B., Tarawally, M., Segbefia, D., Kunji, S. B., Nyametso, J. K., Agbozo, M. S., Kicheek, C., Owusu-Ansah, E., & Afriyie, A. A. (2023). Analysing landcover and green cover change in Winneba using remote sensing and geospatial techniques. In E. Y. Danso-Wiredu & J. Weiler *Winneba: The Geography, Peoples and Systems*. Tema: Digibooks Ghana. 89-123).

Abotsi, A. K., & Kursah, M. B. (2023). The economic history of Winneba. In E. Y. Danso-Wiredu & J. Weiler *Winneba: The Geography, Peoples and Systems*. Tema: Digibooks Ghana. 39–50.

Conference/Workshop/Symposia/Seminar with Presentations

Nicholas Kwame Essah. (May 23-29). *Internal Migration, Urban Labour Markets Informalization and Welfare in Ghana* [Paper presentation]. African Economic Research 58th Biannual Conference, Ghana (Virtual), Nairobi, Kenya.

Abstract

Ghana has rapidly experienced urban transition over the past decade with more than half of the population living in the urban areas and the proportion is even higher for the migrant population. This transition presents more challenges than opportunities to the few big cities which have over expanded to the detriment of several smaller cities in Ghana. Using the last two waves of the Ghana Living Standards Surveys (GLSS 6 and GLSS 7) and the Population and Housing Census-2021, this study seeks to investigate the nexuses between internal migration, urban informal labour market, and welfare in Ghana. In the first essay, the study identifies the pathways through which internal migration contributes to the urban transition process and further examines their determinants in extended probit and multinomial logit estimation techniques. In the second essay, the study will focus on how internal migration contributes to the informalization of the urban labour markets in Ghana and assess the channels through which this occurs using an extended probit technique. We further examine the determinants of the urban labour market's structural transformation of internal migrants in the urban transition process. In the final essay of the study, we will focus on examining the channels through which internal migration and urban informal labour markets affect migrant welfare in Ghana using the Copula-Based Maximum Likelihood sample selection procedure and Multinomial logit with endogenous switching estimation techniques. The outcome of this study can help to inform government policy direction in pursuing the UN-Habitat "sustainable urban settlement for all" agenda in Ghana.

Key words

Internal Migration; Urban Labour Markets; Informalisation; and Welfare

Ababio, Gyamfi Abraham. (2022, November 16). Social Capital and poverty reduction in Ghana: a spatial analysis of the role of civic participation on the incidence of poverty in Ghana [Paper presentation]. Faculty of Social Sciences Education Seminar, Winneba, Central Region, Ghana.

Abstract

Poverty level in sub-Saharan African countries such as Ghana remains considerably high despite recent success in reducing it. Policy makers and development practitioners alike are continuously in search for new pathways to achieve the first Sustainable Goal of eliminating poverty. This study explored the role of social capital for reducing rural poverty in Ghana—a sub-Saharan African Country. Specifically, the study sought to assess the effect of civic participation on the odds of suffering poverty in two geographical areas: urban and rural areas. We used data from the 7th round of the Ghana Living Standard Survey (GLSS, 7). The study combined multilevel mixed-effect models with treatment models to analyse the data. In general, we found that civic participation reduces the incidence of both absolute and extreme poverty. In the multilevel mixed-effect logistic model, the study found that *attending a town hall meeting, writing a letter to authorities, joining a political rally and political campaign* reduce the odds of poverty. Sub sample analysis using rural and urban areas revealed that the effect of civic participation on poverty only holds in rural areas. The study found that in rural areas, *attending a town hall meeting, writing a letter to an authority, joining a political rally, campaigning for a political party, and taking part in demonstrations* reduce the incidence of absolute poverty. A robustness check using the nearest matching treatment effect model also confirmed some of these results. The major implications of these findings for policymaking are discussed

Keywords

poverty, civic participation, Ghana, social capital, multilevel mixed effect logistic model, treatment effect model

Ababio, Gyamfi A. (2023). Towards the Franchising of Pentecostal/Charismatic Churches for Development: An Exploratory Analysis of the Involvement of Religious Denominations in Poverty Reduction Activities in Ghana [Paper presentation]. Faculty of Social Sciences Education Seminar, Winneba, Central Region, Ghana.

Abstract

Undoubtedly, most Orthodox religious denominations have contributed immensely towards poverty reduction in Ghana. However, in recent years, the *modus operandi* of some Pentecostal/Neo-Pentecostal churches have exacerbated public disenchantment in respect of the perceived role of the church in national development.

This study compared the performance of Pentecostal/Neo Pentecostal churches to other religious denominations in terms of their level of involvement in poverty reduction activities in Ghana. The study also constructed some performance indices to objectively assess the level of involvement of religious denominations in poverty reduction activities. Data for the study comes from the Ghana Living Standard Survey, round 7 (GLSS-7) and Religion in Poverty Reduction Survey (RPRS) from Greater Accra Region, Ghana. Descriptive statistics, logit model, multinomial logit model and Mantel-Haenszel differential information functioning were used to analyze the data. The study found that the presence of Pentecostal/Charismatic as the major religious denomination in rural communities was significantly negatively associated with the provision of drinking water and improvement in social amenities but the presence of Protestant denominations as the major denomination in rural communities was positively associated with the provision/maintenance of health facilities. The study also found that the presence of Protestant denomination as the major religious denomination in a community was found to be negatively associated with the odds that the welfare of rural communities became *worse*. Results also show that all religious denominations obtained a *low* score on both the Religious Denominations in Social Service Delivery Index (RDSSDI) and Religious Denominations in Poverty Reduction Index (RDPRI) but obtained *medium* score on Religious Denominations in Awareness Raising Index (RDARI). The study concludes that many Pentecostal/Charismatic churches operate as free-standing entrepreneurial organizations, and therefore contribute little to community development. Among other things, the study recommends that government should enact and enforce an institutional framework that requires the franchising of the establishment and operations of Pentecostal/Charismatic churches to maximize their impact on poverty reduction in Ghana.

Keywords:

Religious denominations, Pentecostal/Neo-Pentecostal, franchising model, religion in poverty reduction index, religious denominations in social service Delivery index, religious denominations in awareness raising index

Ababio, Gyamfi Abraham. (2022). Religion, inequality, and Poverty in Ghana: The role of Educational Attainment [Paper presentation]. 5th International Research Conference, Accra-Legon, Greater Accra Region, Ghana.

Abstract

Religion could influence poverty by fostering certain norms, values and providing information that could affect productivity, labour force participation, and asset accumulation. This study sought to achieve three purposes: (1) to describe the nature of poverty and inequality among the various religious denominations; (2) assess the effect of religious affiliation on poverty in Ghana; and (3) to determine the impact of religious affiliation on the level of educational attainment in Ghana. The study

used nationally and regionally representative data from the sixth round of the Ghana Living standard survey. Foster-Greer-Thorbecke formula was used to compute the levels of poverty; Gini, Palma, and Generalized entropy indices were used to assess the level of inequality among the various religious denominations; multilevel mixed-effect logistic and multilevel mixed-effect ordered logistic models were used to assess the effect of religious affiliation on poverty and the levels of educational attainment respectively. The study found that: (1) compared to those who are not affiliated with any religious denomination, in urban areas, affiliation with a religious denomination exerts a negative influence on the incidence of poverty; (2) affiliation with Muslim religion increases the odds of the incidence of poverty; (3) except Muslims, compared to the unaffiliated, affiliation with a religious denomination increases the odds of attaining higher level of education. The study concludes that religious affiliation has a negative influence on the incidence of poverty for those who live in urban areas in Ghana. This negative effect passes through higher level of educational attainment.

Keywords

religious affiliation, poverty, inequality, educational attainment, multilevel mixed-effect ordered logistic model, urban area



FACULTY OF GHANAIAN LANGUAGES EDUCATION

ARTICLES IN JOURNALS

Odoom, J., & Adomako, K. (2022). Vowel nasality in Akan. *Lege Artis. Language Yesterday, Today, Tomorrow*, 2(Special Issue), 145-171.

Abstract

This paper discusses vowel nasality in Akan, a Kwa language. Nasality in Akan is surface-contrastive in vowels and could be phonemic or phonetic. We show that nasal vowels contrast with oral counterparts, and also occur mainly after voiceless consonants in Akan. Moreover, there are disparities between the production and distribution of the oral-nasalnasalized vowels, which are phonologically motivated. The environments of the nasalized vowels in Akan are accounted for.

Odoom, J., Adomako, K. (2022). Nasalisation and Nasal Assimilation in Akan. *Ghana Journal of Languages, Linguistics and Literature (GJoLLL)*, Vol. 1(No. 1), 1 - 24 1. [https://journals.uew.edu.gh/index.php/gjoll#::~:~:text=and%20Literature%20\(GJoLLL\),The%20Ghana%20Journal%20of%20Languages%2C%20Linguistics%20and%20Literature%20\(GJoLLL\),%2C%20University%20of%20Education%2C%20Winneba](https://journals.uew.edu.gh/index.php/gjoll#::~:~:text=and%20Literature%20(GJoLLL),The%20Ghana%20Journal%20of%20Languages%2C%20Linguistics%20and%20Literature%20(GJoLLL),%2C%20University%20of%20Education%2C%20Winneba)

Abstract

This paper discusses nasalisation and nasal assimilation in Akan, a Kwa (NigerCongo) language. The paper demonstrates that nasalisation and nasal assimilation in Akan can be local, homorganic (partial), or total. The underlying voiced alveolar nasal /n/ surfaces with the initial consonant of the following stem to be realised as a homorganic or nasal sound. The paper shows that among the three major dialects of Akan (Fante, Asante, and Akuapem), Fante exhibits only place (homorganic) assimilation, while Asante and Akuapem demonstrate both places (homorganic) and manner assimilation. Moreover, the paper establishes that nasalisation and nasal assimilation in Akan is adjacent, partial, complete (total), bidirectional, and either regressive or reciprocal. Nasalisation and nasal assimilation in Akan occur mainly in the domains of stems, compound words, plural formation, negation, imperative, and reduplicative constructions. This paper therefore contributes to

the typology of consonant-consonant (C-C) assimilations that occur in Akan: nasal place assimilation and consonant nasalisation. We formalise our discussions within the theoretical framework of Feature Geometry (FG) Phonology.

Sackitey, M. & Adomako, K. (2021). A comparative analysis of tone structure in Akuapem Twi and Asante Twi: An acoustic account. *Journal of the Linguistic Association of Nigeria*, 24(2), 204-234.

Abstract

This study comparatively examines the tonal structures of Akuapem Twi and Asante Twi. It precisely focuses on examining syntactic structures with similar tonal structures as well as those with different tonal structures in both dialects from an acoustic perspective. Subsidiary to the acoustic evidence, a further autosegmental formalization of the syntactic structures with different tonal structures are analyzed to demonstrate the phonological and tonal rules triggering the differences. The mean of the pitch values of three (3) Akuapem Male Speakers and three (3) Akuapem Female speakers are compared with the Asante mean values identified in pronouncing the same syntactic structures tokens. The age range of speakers recorded is 20-60 years. Graphs showing the PRAAT pitch values show the syntactic structures with similar as well as different tonal structures in both dialects. The paper concludes with the proposal that as a result of some tonal and phonological rules, syntactic structures such as pronominals and HLH nouns, HL nouns, imperative verbs and a CV pronominal objects as well as pronominals and negative verbs with a CV post-position all have different tonal structures in both dialects.

Odoom, J. & Adomako, K. (2021). Progressive vowel harmony in Gomoa. *Ghana Journal of Linguistics*, 10(2), 58-83. DOI: <http://dx.doi.org/10.4314/gjl.v10i2.3>

Abstract

Previous studies on Akan ATR vowel harmony have centered on the concepts of regressive (anticipatory) directionality, very little empirical evidence has been provided for the existence and robustness of progressive ATR vowel harmony in Akan. This paper, therefore, discusses progressive ATR vowel harmony (VH) in Gomoa, a sub-dialect of Fante, one of the major dialects of Akan (Kwa, Niger-Congo). The paper attempts to argue that Gomoa unlike the other Akan dialects has progressive ATR vowel harmony. In this study, we show that the +ATR vowel in the root/stem word triggers rightward to harmonize with the -ATR vowel in the suffix or a following vowel in the same domain. Data gathered, show that Gomoa extensively

displays progressive vowel harmony in stem words, verbal suffixes, and nominal suffixes, and also shows +ATR dominance vowel harmony. We discuss this occurrence within the framework of Autosegmental phonology (following Goldsmith, 1976) to show the directionality and spreading ATR harmony. This paper, therefore, contributes to the study of the directionalities of vowel harmony in Akan.

Akrobettoe, R. T., Caesar, R. O. & Amuzu, E. K. (2022). Dialectal variation in lexical borrowings in Dangme. *Ligon Journal of the Humanities*, 33(2), 1-28. DOI: <https://dx.doi.org/10.4314/ljh.v33i2.1>

Abstract

This paper investigated dialectal variation in lexical borrowings in Dangme, a language spoken in Southern Ghana. Dangme has seven dialects (Ada, Gbugblaa, Yilo Krobo, Manya Krobo, Nugo, Se and Osudoku), but this study concerns lexical borrowings into the first four. The language is in contact with four languages from which it has borrowed: Ewe, Ga, Akan, and English. Each dialect of Dangme is in direct contact with English, the official language of Ghana, and with at least one of the three Ghanaian languages. While Ada is in contact with Ewe and Gbugblaa with Ga, both Yilo Krobo and Manya Krobo are in contact with Akan and, to some extent, Ewe. The study departed from focus on the phonological adaptation of borrowed words, the subject matter of previous studies, to pursue two interrelated objectives, i.e., to find out: (i) whether, and to what extent, borrowings into a dialect from a given source language remain localized or are transferred to the other dialects and (ii) whether, and what extent, the lexical borrowings constitute additions to the Dangme lexicon or, conversely, a relexification of native words in the lexicon. Eighty (80) respondents, 20 each from the four dialects considered, were purposively sampled to participate in the data collection process and the data analysis was done within the Variationist Sociolinguistics Theory. It was found that while most Akan and English lexical borrowings have become integrated in all the four dialects of Dangme, this is not the case with lexical borrowings from Ga and Ewe. Most Ga borrowings are found only in Gbugblaa and most Ewe borrowings are found only in Ada and, to some extent, Manya Krobo. It was also found that Akan and English lexical borrowings generally constitute additions to the Dangme lexicon while Ewe and Ga lexical borrowings may be seen as subtractive borrowings or cases of relexification in Ada and Gbugblaa respectively. The study is expected to contribute to an understanding of how languages like Dangme whose dialects have geographical contact with different languages develop dialectal variation.

Book

Adomako, K., Odoom, J., & Sackitey, M. (2022). Akan fonetese ne fonologyi (Akan phonetics and phonology). (1). Adonai Publications, Accra. ISBN: 978-9964-30544-3

Abstract

Saa nwoma yi ho abehia efiri se mpen dodoɔ no ara adesuafoɔ ne akyerɛkyerɛfoɔ hwehwe nwoma a efa Akan fonetese ne fonologyi adesua ho a yeatwere no wɔ Akan (Twi) kasa mu ho. Ne titire ne adesuafoɔ ne akyerɛkyerɛfoɔ a wɔwɔ Asuapɔn a Wɔtete Akyerɛkyerɛfoɔ *Colleges of Education* ahodoɔ mu a wɔresua Akan (Twi) kasa a enam so bema wɔn nsa aka abodin krataa Bachelor of Education (Early Grade/Upper Primary/JHS options). Enam se yede Colleges yinom abata Asuapɔn atitire binom te se University of Cape Coast, University of Education, Winneba, University of Ghana, Kwame Nkrumah University of Science and Technology ne University for Development Studies no nti, akɔhia se Colleges of Education ahodoɔ a ehye Ghana Aban ase no nyinaa mu akyerɛkyerɛfoɔ no nya ntetee korɔ (Professional Development Sessions) ansa na adesua bere (semester) no ahye asee sedee ebeye a wɔbetumi de adesua akyerɛkyerɛkwan nwoma *Manual* a Aban ama yeaye ama wɔn no betete adesuafoɔ. Mpen pii no akyerɛkyerɛfoɔ yi ara wɔtete adesuafoɔ yi hyia wɔProfessional Development Sessions yinom ase a na nsempɔ atitire (key terms) korɔ anaa nteasee korɔ a ese se wɔnya wɔadesuadee bi te se fonetese ne fonologyi ho no ho asem aye den pa ara. Ne saa nti na eho abehia se yeka yen tiri bom na yeto yen bo ase kyerekyere Akan fonetese ne fonologyi adesua no nkorabata mu yie na aboa ama adesuafoɔ ne akyerɛkyerɛfoɔ a wɔresua Akan (Twi) ate saa adesuadee yi ase yie. Yeato yen bo afa nsentitire a ewowɔ Ghanaian languages Manual no mu na yede atwere saa nwoma yi. Eye yen awerehyemu se nwoma yi beboa ama adesuafoɔ ne akyerɛkyerɛfoɔ ate Akan fonetese ne fonologyi ase yie na ama ne sua no aye mmre asan nso aye anika. Enye adesuafoɔ ne akyerɛkyerɛfoɔ a wɔwɔ Colleges of Education nko ara na wɔbehia nwoma yi. adesuafoɔ a wɔwɔ Asuapɔn ahodoɔ yekyerɛAkan wɔ ho a wɔresua Akan fonetese ne fonologyi nso yegye di se nwoma yi beye ama wɔn pa ara. Se wohwe nwoma yi mu a, yede nsentitire bi nso aka ho a yegye di se adesuafoɔ a wɔresua biribi afa Akan fonetese ne fonologyi ho de ape abodin Master's nso se wɔkenkan nwoma yi a ebɛboa wɔn. Yeahyeda atwe saa adesuafoɔ yi adwene asi mmeaee ahodoɔ a ese se wohwe ne nwoma nkae a ese se wɔkenkan na aboa wɔn nteasee wɔ saa nsentitire no mu. Seyeka yeyinom nso a na yegye di bio nso se enam se yeato yen bo ase akyerɛkyere nsentitire binom mu nti, adesuafoɔ a wɔwɔ gyinapen nkae no mu bi nso betumi akenkan nwoma yi ama no aboa wɔn. Yeakyekye nwoma yi mu akɔ Ti (Chapters) ahodoɔ du (10) mu. Ti no mu biara wɔ afa (sections) ahodoɔ ena ɔfa biara nso wɔ ɔfa kumaa (sub-section). Yeabo mmɔden se ɔfa biara awiee no yeama adesuani dwuma a ɔbedi ama no aboa ne nteasee a ɔbenya wɔ saa ɔfa no mu. Bio, enam se yeatwere nwoma yi wɔ Twi mu na yenim se Twi wɔ nkorabata atitire a yesua mmieniu a eye Asante ne Akuapem nti, yeatwere ahodoɔ no wɔ Asante ne Akuapem mu. Dee yeaye ne se, se wofa Ti biara, emu afa ahodoɔ no mu bi wɔ Asante mu ena ebi nso wɔ Akuapem

mu. Yeahwe se yeamfa Asante ne Akuapem amfrafra wɔ ɔfa bi mu. Ewom se yeatwere nwoma yi wɔ Twi mu deɛ, nanso nhwesoo ahodoɔ no wɔ Akan kasa no nkorabata atitire mmiensa a eye Akuapem, Asante, ne Mfante mu.

Conference/Workshop/Symposia/Seminar with Presentations

Caesar, R. O. & Akrobettoe, R. T. (2021, July 28-30). Verbs of cooking in Dangme [Paper presentation]. 13th Linguistics Association of Ghana (LAG) Conference, Cape Coast, Central Region, Ghana.

Abstract

This paper investigates verbs of cooking in Dangme, a language that belongs to the Kwa family group of languages. It aims at identifying the culinary terms used through the lexical field analysis of Dangme generic verbs of cooking such as *hoo* ‘cook/boil’, *sĩ* ‘fry/roast’ and *sã* ‘bake/grill/roast’. It also examines how its subfields are classified in Dangme and further discusses the syntax and the relationship of inclusion within the semantic field, hyponymy, of the selected Dangme verbs of cooking and the variety of food items they co-occur with. Data were collected from sixty adult native speakers of Dangme through questionnaires, semi-structured interviews and focused group discussions. The data revealed that there are a number of lexical items used in describing cooking processes in Dangme, and these verbs have hyponymous relations with selectional restrictions of the food items they co-occur with in Dangme. It was also revealed that the cooking verb *sã* has three different related meanings. These are ‘to roast’, ‘to bake’ and ‘to grill’. Three different sets of synonyms were also identified. They include *sa* or *kpɔ*, ‘to grind’, *sĩ/sĩ...he*, *dlɔ/ dlɔ...he*, *fiaa...la* and *hoo...he* ‘to steam’ and *tsukɔ* or *tsu* ‘to smoke.’

Keywords:

Dangme, cooking verbs, lexical fields, hyponymy, selectional restrictions.

Akrobettoe, R. T, Caesar, R. O. & Amuzu, E. K. (2021, November 3-5). Dialectal variation in lexical borrowings in Dangme [Paper presentation]. 4th School of Languages Conference (SOLCON), Legon, Accra, Greater Accra, Ghana.

Abstract

This paper investigates dialectal variation in lexical borrowings in Dangme, a language spoken in Southern Ghana. The language is in contact with four languages from which it has borrowed: Ewe, Ga, Akan and English. Dangme has seven dialects (Adaa, Gbugblaa, Yilo Krobo, Manya Krobo, Nugo, Se and Osudoku), but this study concerns lexical borrowings into the first four. Although each dialect is in direct contact with English, the same thing cannot be said about their contact with

the three Ghanaian languages; while Adaa is in contact with Ewe and Gbugblaa with Ga, both Yilɔ Krobo and Manya Krobo are in contact with Akan and, to some extent, Ewe. A major research question explored is whether and to what extent borrowings into a dialect from a given source language remain localized or are transferred to the other dialects. Eighty (80) respondents, 20 each from the four dialects considered, were purposively sampled to participate in the data collection process. Elicitation was the main instrument used and it was complemented with sociolinguistic interviews aimed at obtaining social information about each participant. It was found that while most Akan and English lexical borrowings have become integrated in all the four dialects of Dangme, this is not the case with lexical borrowings from Ga and Ewe. Most Ga borrowings are found only in Gbugblaa and most Ewe borrowings are found only in Adaa and, to some extent, Manya Krobo dialects. However, few borrowings from Ewe are also cross-dialectal. It is also found that some of the lexical borrowings still compete with their Dangme equivalents while some others have replaced their equivalents. The theoretical framework employed is the Variationist Sociolinguistics Theory.

Caesar, R. O., Yakub, M. & Akrobettoe, R. T. (2022, April 7-9). The ethno pragmatics of *yi* and *ti* ‘head’ metaphors in Dangme and Nzema [Paper presentation]. 53rd Annual Conference on African Linguistics (ACAL), California, San Diego, USA.

Abstract

This paper focuses on head-related expressions in Nzema and Dangme, two Kwa languages of Ghana. We examine how *ti* and *yi* ‘the human head’ is conceptualised physically and metaphorically in Nzema and Dangme, highlighting the similarities and differences based on socio-cultural experiences and conceptualisation patterns of the Nzema and Dangme people. In this paper, we position our scholarship on metaphors of ‘head’ among the Nzema and the Dangme as culturally constructed. The analysis is based on data obtained from both primary and secondary sources. The primary data comprise examples that were hand-recorded from spontaneous natural speech contexts in both Nzema and Dangme communities, including other examples generated based on the researchers’ native speakers’ intuitions. Supplementary secondary data were extracted from Nzema and Dangme literary texts. The paper shows that both Nzema and Dangme have a rich variety of expressions related to the head; which serves as container for conceptualisations of intelligence and wickedness. Other phenomena such as fortune, prosperity, disgrace and death are construed in terms of cognitive representation of the head. The paper further reveals that virtues like hard-work, unity, trust and transparency are communicated through head-related expressions in Nzema and Dangme. We note that Nzema and Dangme speakers use ‘colour metaphors’; both white and black in relation to the internal part of the head to describe ‘positive thinking’ and ‘cruelty’ respectively. The paper employs Cultural Conceptual Metaphor Theory (Sharifian, 2011; 2017; Lakoff and Johnson, 1980) to guide the analysis.

Article(s)/Chapters in an Edited Book

Adomako, K. & Amoah, B. (2020). The so-called Asante nominal suffixes: a re-analysis. In Yuka, C., Ahoua, F. & Railland, A.(eds.) *The roles of West African languages: Development and Integration*. L'Harmattan, Paris.

Abstract

The nominal suffixation, as a morphological process, has been discussed in existing literature on Akan as a phenomenon whereby in addition to the regular prefixation, where necessary, in verbal nominalization, the Asante dialect adds a mid vowel as a suffix to the already nominalized verb. This phenomenon has often been assumed to be idiosyncratic to the Asante dialect of Akan. The selection of these mid vowels as a nominal suffix is with recourse to the ATR and rounding values of the stem vowels. For example, a verb that ends in *wu* 'to die' /u/, which is specified for [+Round, +ATR] will invariably select for [o] as its suffix when nominalized in the Asante dialect. As the name suggests, it has been widely assumed that these suffixes exclusively co-occur with nominals in the Asante dialect. In this paper, we show that this long-standing assumption could not be correct. With language-internal examples, we demonstrate that these so-called nominal suffixes can also co-occur with other lexical categories including verbs, pronominals, postpositions (relator nouns) and demonstratives. It is therefore proposed in the present paper that on grounds of economy principles, it would suffice to simply term these suffixes the *Asante suffixes* instead of the oft-termed the *Asante nominal suffixes* in the existing literature.



SCHOOL OF CREATIVE ARTS

ARTICLES IN JOURNALS

Tayviah, S.K, Quaye, R., Okae-Anti, E & Bedu-Addo, J. (2023). Teaching Strategies for the Visually Impaired in Visual Arts. *International Journal of Innovative Research and Development*, 12(3), 60-65.

Abstract

A 2018 study by the Eye Unit of the Ghana Health Service revealed that about 270,200 Ghanaians are blind, representing 0.74% of the Ghanaian population. Records indicate that the education and training of the blind people in Ghana date back to the early 1940's. The study of Creative Arts involves experimentation and interaction with the natural environment as a problem-solving tool for national development. Creative Arts encompasses art forms like Painting, Sculpture, Graphic Design and Ceramics. However, in the study of Art in Ghana, certain challenges have become barriers for the visually impaired who pursue art. This is a conceptual study conducted at the University Practice School, South Campus, Ghana. It delves into the challenges that visually impaired learners are exposed to in the study of Arts and establishes if it is the end of the road for a mainstream student who becomes visually impaired along the path in pursuing the dream as an artist. The study identified that visually impaired learners can express themselves artistically once the teaching and learning process is facilitated with tailor-made teaching and learning strategies in Art which directly focuses on potential art learners who are visually impaired. The study gathered that mainstream education in Ghana should be restructured to enable harnessing the potential of visually impaired learners.

Keywords

Art Education, Visual Impairment, Inclusivity in Education

Arhin Jnr, B., O., Coffie, M., Konu, M., Hope, S., & Ferguson, E. E. A. (2022). Split sheets in Ghanaian recording studios. *International Journal of Music Business Research*, 12(1), 1-10. DOI: <https://doi.org/10.2478/ijmbr-2023-000>

Abstract

The split sheet used at a recording studio is one of the essential means for any creative artist who understands its implementation benefits from the royalties that the creative work generates as it gets commercial merchandise. However, surprisingly, Ghanaian music producers and practitioners are yet to tap into the full potential of this avenue. This paper investigates the awareness and benefits of the split sheet among Ghanaian music producers and practitioners in the recording industry and the extent to which they have explored it. Using a mixed-methods mode of inquiry for data collection, we sampled music producers and practitioners (n = 218) in Ghana to briefly analyse the moneymaking through split sheets of songs available to music practitioners in Ghana's recording industry. It was noted that 94.9% of respondents were unaware of the split sheet, while 92.7% did not know the benefit of the split sheet. However, only 4.6% of the respondents had used the split sheet. Subsequently, we conclude that the low awareness of the split sheet among Ghanaian music producers and practitioners compromises the decorum of the business side of creativity in the Ghanaian recording industry. Therefore, we recommend that more intensive education be undertaken to sensitise Ghanaian music producers and practitioners to the benefit of the split sheet in their daily work to enhance revenue generation.



SCHOOL OF COMMUNICATION AND MEDIA STUDIES

ARTICLES IN JOURNALS

Sackey, R., Asiamah, E. O. & Osei-Mensah, B. (2022). Data Journalism in Africa: A Systematic Review. *Advances in Social Sciences Research Journal*, 9(12), 248-259. DOI: <https://doi.org/10.14738/assrj.912.13612>

Abstract

This study examines the state of Data Journalism scholarship within the African context. The analysis is based on 11 published academic articles retrieved from, Google Scholar, and Sage, ResearchGate and Taylor&Francis and a content analysis process obtained from the existing literature. The review reveals that most of the data journalism research on the African continent is empirical and qualitative in nature. More so, the majority of the studies focused on the practice of data-driven journalism by journalists in print newsrooms. This systematic review is a significant contribution to data journalism research in literature. It serves as the first attempt to aggregate the corpus of literature on data journalism within the African context. It specifically exposes scholars to the focus of the current studies on the phenomenon, the theories and methods that have been employed as well as the gaps that are yet to be explored by researchers on the phenomenon.

Asiamah, E. O., Osei-Mensah, B. & Sackey, R. (2022). Research on Media Framing in Ghana: A Systematic Review. *Research on Humanities and Social Sciences*, 12(24), 12-23. DOI: <https://doi.org/10.7176/RHSS/12-24-0>

Abstract

This systematic review interrogates the present state of framing research in Ghana. The purpose is to synthesise the existing literature on media framing in the Ghanaian context and to detect the gaps that need to be filled. A qualitative content analysis of seventeen open-access journal articles retrieved from five databases (International Knowledge Sharing Platform, Taylor and Francis Online, Semantic Scholar, Research Gate, Sage Publications) is conducted to examine the issues discussed

in the articles, the mass media type analysed and the research methods used in addressing the issues in the articles. The articles identified were published between 2013 and 2022. Content analysed data were thematically discussed to answer the research questions. The study revealed that research on media framing in Ghana centred on health and sexuality, politics and elections, environmental issues and others. The review further identified fifteen empirical studies out of the seventeen articles retrieved. Researchers also focused more on exploratory (qualitative) than explanatory (quantitative) research methods. In addition, most of the identified studies were skewed more toward print media and online media (traditional media websites) than broadcast media and other forms of online media, such as blogs. This review paper is the first of its kind; hence, will provide significant knowledge on media framing in the Ghanaian context to future researchers. It will also set the premise for other reviews to be conducted on various aspects of the concept in the Ghanaian context.

Osei-Mensah, B., Asiamah, E.O. & Sackey, R. (2023). Strategic Communication and Artificial Intelligence: Reviewing Emerging Innovations and Future Directions. Archives of Business Research, 11(1), 85-102. DOI: <https://doi.org/10.14738/abr.111.13616>

Abstract

This review examines the adoption of artificial intelligence (AI) as a novel technology for strategic communication. This study includes a survey of pertinent literature that highlights innovative communication linked to AI applications in public relations, marketing and branding, political communication, and customer relations with the goal of enlightening both research and practice. Emerald Insight and Google Scholar, two essential online databases, were used to retrieve and analyse information from peer-reviewed journal articles and chapters (n = 17) published between 2017 and 2022. Based on the main inquiries raised by there-search, significant themes were discovered and critically explored. Political communication with AI, AI-focused public relations and marketing approach, and conversational AI assistants were the major themes in the research on strategic communication and AI integration. These studies were primarily the outcome of quantitative and mixed-method techniques used in a western environment. This review satisfies the need for research on AI and strategic communication that makes in-ferences applicable to the context in Ghana. The study's conclusion outlines a re-search agenda for the future, emphasising the need for research on particular topics like integration of AI voice assistants in relationship marketing domains, adoption of wearable technology and its relevance to customers' health consciousness as well as privacy concerns of emerging innovation. Future studies should also focus on developing more evidence-based AI suggestions for strategic communication prac-titioners, as well as a thorough methodological and theoretical discussion of how to further close the gap between research and practice in the African setting.

Jamil, S. & Appiah-Adjei. G. (2023). Let's draw a line between dos and don'ts: Pakistani journalists' perspectives about the ethics of conflict-sensitive reporting. *Journalism and Media*, 4(1), 177-196. DOI: <https://doi.org/10.3390/journalmedia4010013>

Abstract

In conflict-ridden countries, the news media has a pivotal role to perform as an active advocate of human rights and societal peace, as well as a facilitator of conflict mitigation and resolution through the gathering and dissemination of non-partisan information. While today the world witness armed conflicts in more forms than ever before, some countries are more sensitive to conflict and violence—such as Pakistan. The country is recognized as one of the riskiest places for working journalists by virtue of recurrent political, ethnic, and religious conflicts. The Pakistani journalists work in a climate of fear and risks and with opposing groups seeking to influence the news media, which creates more difficulties for them to report unbiased and accurate news to the public. The practice of ethics has become more challenging for the Pakistani journalists because the country lacks an effective and standardized code of conduct to report on conflict. Therefore, drawing on the theory of the conflict triangle by Galtung, this study seeks the Pakistani journalists' perspectives about the ethics of conflict sensitive reporting. In doing so, this study uses the quantitative method of survey and the qualitative method of in-depth interviews. The study uses descriptive analysis to present the survey findings in the form of percentage and thematic analysis to present the findings of interview data.

Jamil, S. & Appiah-Adjei. G. (2020). Battling with Infodemic and Disinfodemic: The Quandary of Journalists to Report on COVID-19 Pandemic in Pakistan. *Media Asia*, 47, 88-109. DOI: <https://doi.org/10.1080/01296612.2020.1853393>

Abstract

The outbreak of COVID-19 pandemic has impacted all sectors of life. Despite economic downturn, one major impact of global pandemic is the rise of 'infodemic' and 'disinfodemic', which actually creates challenge for the public to access reliable information when they require it. News media plays a crucial role in such stressful situations by providing timely and accurate information about the pandemic. Nevertheless, when the news verification and gatekeeping are weak, dissemination of false information within the infodemic can result in the toxic disinfodemic of disinformation and misinformation. It is imperative to recognize that journalists, especially in restrained environments (like Pakistan), can combat infodemic and disinfodemic about the pandemic when their safety and accessibility to needed information are guaranteed, and when they are not prone to diverse challenges. Therefore, drawing on Reese's hierarchy of influences model, this study seeks to

explore the various levels of influences that impact on the Pakistani journalist's reporting and their ability to deal with the challenges of infodemic and disinfodemic amid COVID-19 pandemic. Moreover, this study uses qualitative method of in-depth interviews (online) and employs thematic analysis to address the study's findings.

Appiah-Adjei, G. (2019). Journalism in the era of mobile technology: The changing pattern of news production and the thriving fake news trend in Pakistan and Ghana. *World of Media. Journal of Russian Media and Journalism Studies*, 3, 42- 64. <http://worldofmedia.ru/volumes/2019/Journalism%20in%20the%20era%20of%20mobile%20technology.pdf>

Abstract

The advent of new technologies has resulted in the rise of mobile journalism around the globe. Mobile devices have reformed the newsroom environments by introducing new means to connect with the audience and to communicate with other journalists within the same place. Many traditional media organizations already produce news content for mobile web-sites and apps in proportion to cross-media strategies, reflecting structural changes in the journalism industry and transformation in the process of news production in many countries and although coming from different cultural traditions and geographical locations, Pakistan and Ghana are no exceptions. However, there are concerns about the potential role of mobile journalism in fostering the culture of fake news in both countries. Thus, using the media convergence and social responsibility theories, this study aims to analyse how mobile journalism is altering the news production process and fostering the trend of fake news in Pakistan and Ghana. To accomplish this aim, this study uses the qualitative methods of document review and in-depth interviews and offers a thematic analysis of the qualitative data.

Book

Roberts, T., Gitahi, J., Allam, P., Oboh, L., Oladapo, O. A., Appiah-Adjei, G., Galal, A., Kainja, J., Phiri, S., Abraham, K., Skelton, S. K. & Sheombar, A. (2023). Mapping the Supply of Surveillance Technologies to Africa: Case Studies from Nigeria, Ghana, Morocco, Malawi, and Zambia. (First Edition). Institute of Development Studies, Brighton, UK. ISBN: 978-1-80470-122-5 DOI: <https://doi.org/10.19088/IDS.2023.027>.

Article(s)/Chapters in an Edited Book

Appiah-Adjei, G. (2022). COVID-19 and e-assessment in Ghanaian higher education institutions: The case of journalism education. In A. Mare, E. Woyo and E. Amadhila Teaching and Learning with Digital Technologies in Higher Education Institutions in Africa: Case Studies from a Pandemic Context. Routledge, London. DOI: <https://doi.org/10.4324/9781003264026-10>.

Abstract

The COVID-19 pandemic has disrupted educational systems around the globe and necessitated a paradigm shift in teaching and learning processes. The need to innovate and implement the alternate mode of teaching and learning has resulted in remote learning during the pandemic. Hence, studies on COVID-19, e-learning and its implications have been the focus of researchers. This study extends literature in this field of research by examining the perspectives of students and lecturers on COVID-19 and e-assessment in Ghanaian higher education institutions. Through focus group discussions, and interviews, data are gathered to investigate the challenges confronting e-assessments and effective practices employed to address such challenges in journalism education. Thematic analysis of data through the lens of engagement theory revealed challenges of poor and unstable connectivity, low-class participation, increased workload on lecturers, ineffective feedback, and test insecurity. The effective practices adopted were participation grading, intentional engagement, and sharing videos and relevant materials before lectures.

Appiah-Adjei, G., Mensah, J., & Hammond, P. D. (2022). Media Representation of PWDs and Tourism Development: Role of Ghanaian Media in Enhancing Inclusivity and Gender Equality. In Woyo, E. & Venganai, H Gender, Disability, and Tourism in Africa: Intersectional Perspectives. Palgrave Macmillan Cham, Switzerland. DOI: https://doi.org/10.1007/978-3-031-12551-5_13.

Abstract

People with disabilities in Ghana are confronted with discrimination and exclusion due to negative societal misconceptions. Based on this, there is a need for education and promotion of accurate images of them in the context of tourism development. Evidence submits that media coverage can influence public opinion, change societal misconceptions, and present people with disabilities as part of human diversity. This chapter investigates the role of Ghanaian media in enhancing inclusivity and gender equality in tourism development. Through content analysis of 115 news stories and four interviews with journalists, data were gathered to examine whether the newspapers have drawn the public's attention to people with disabilities through

their coverage to dispel the negative stereotypes and double jeopardy such people face. Thematic analysis of data through intersectionality and media framing revealed that the Ghanaian newspapers are not providing adequate coverage and representation of issues affecting people with disabilities and gender equality for improved tourism development in Ghana.

Appiah-Adjei, G. (2021). Journalism education and ethnic journalism in Ghana: The case study of Ghana Institute of Journalism and University of Education, Winneba. In A. Gladkova & S. Jamil Ethnic Journalism in the Global South. Palgrave Macmillan Cham, Switzerland. DOI: https://doi.org/10.1007/978-3-030-76163-9_3.

Abstract

The growth of journalism education necessitates monitoring to provide updates on its development. Hence, debate in this field is how it can positively influence society. Ethnic journalism is one area journalism education is responding to. Studies on ethnic journalism training abound, yet there is a dearth of such studies in Ghana. The chapter attempts to address this gap. Using focus group discussions, document analysis and in-depth interviews, data are gathered to explore the integration of ethnic journalism training in the Ghanaian journalism curriculum. Thematic analysis revealed the curriculum had given some considerations to ethnic journalism. However, its modification is necessary to ensure ethnic journalism is taught as a full course that focuses on indigenous-language competence and principles and skills of news production in ethnic journalism.

Appiah-Adjei, G. (2021). Confronting freedom to inform with freedom of expression: The case of online attacks of journalists in Ghana. In S. Jamil, B. Coban, B. Attaman & G. Appiah-Adjei Handbook of Research on discrimination, gender equality and safety risks in journalism. IGI Global, USA. <https://www.igi-global.com/chapter/confronting-freedom-to-inform-with-freedom-of-expression/267640>

Abstract

Globally, there is an increase in online attacks on journalists with gender dimensions to these attacks. Also, it is established that digital innovations have augmented free expression and the augmentation allows means for online attacks. Though evidence submits that studies on the problem of online attacks on journalists abound, there is dearth of such studies in Ghana and this chapter attempts to fill this gap. Using the feminist theory, this chapter explores the types and sources of online attacks on male and female journalists in Ghana and investigates whether an increase in free expression is a contributing factor to the problem. To achieve this aim, the study employs qualitative methods of in-depth interviews and document reviews and

offers a thematic analysis of the qualitative data to understand the lived experiences of Ghanaian journalists. Findings revealed that journalists frequently experience psychological and sexist online attacks when perpetrators express their views on unfavourable coverage from the media.

Jamil, S. & Appiah-Adjei. G. (2021). Discrimination, gender equality and safety risks in journalism: An introduction. In S. Jamil, B. Coban, B. Attaman & G. Appiah-Adjei Handbook of Research on discrimination, gender equality and safety risks in journalism. IGI Global, USA. <https://www.igi-global.com/chapter/discrimination-gender-disparity-and-safety-risks-in-journalism/267624>

Abstract

International media monitoring organisations have continually called for commitment of critical actors of free expression and media freedom to ensure the safety of journalists in their strive for open societies. Another dimension to this call is the need to draw attention to the issue of gender-based threats and discrimination in the media industry and its implications for free expression and media freedom. This chapter explores discrimination, gender equality, and safety risks in journalism.

Appiah-Adjei, G. (2020). The Role of Ghanaian news media organisations in countering threats to media freedom and journalists' safety. In S. Jamil The Handbook of Research on combating threats to media freedom and journalist safety. IGI Global, USA. <https://www.igi-global.com/chapter/the-role-of-ghanaian-news-media-organisations-in-countering-threats-to-media-freedom-and-journalists-safety/246435>

Abstract

Journalist safety is vital to media freedom as it shows stakeholders' duties to protect the media from crime and to guard media freedom. The media have the power to combat problems via coverage, yet evidence submits that journalist insecurity persists in Ghana. So, the study aims to examine how the Ghanaian media are tackling journalist insecurity through coverage. Using agenda-setting and framing theories, content analyses of 66 news stories from newspapers, and five interviews are used to gather data to study the coverage and framing of journalist insecurity in the media and how they tackle threats to media freedom. Thematic analysis of data gathered showed that the newspapers were unable to give prominence to the problem because only 30.60% of total editions gave attention to the issue. Also, the media failed to present journalist insecurity as an issue that needs national attention because only 10.6% of the news stories used thematic frames. This undermines media freedom as it allows journalist insecurity to thrive, hence, failure to advocate journalist safety.



FACULTY OF EDUCATIONAL STUDIES

ARTICLES IN JOURNALS

Fatawu, A. R., Kwakye, D. O., Atepor, S., Owuba-Asiedu, L., Segbefia, C. R., Asemani, E., & Nchor, E. Y. (2022). Exploring Factors that Hinder Senior High School Students' Academic Performance in Mathematics. *Journal of Education, Society and Behavioural Science*, 35((12)), 1-18. DOI: <https://doi.org/10.9734/jesbs/2022/v35i121190>

Abstract

The study explored factors affecting senior high school students' academic performance in the Kassena-Nankana Municipality. Eighty-one (81) students, fifty-one (51) males and thirty (30) females were used to gather cross-sectional data on demographics and factors influencing their mathematics ability. They came from two senior high schools in the municipality, which were randomly sampled. Students in the chosen schools were asked to fill out questionnaires. The mixed-methods research approach was used and the descriptive design was adopted. The data was examined using a qualitative study that used a survey design to carry out the investigation. The findings showed that students' attitudes play a significant role in determining how well they succeed in mathematics. These include pupils who don't find mathematics very intriguing and who aren't motivated to learn the subject, among other things. Again, there was evidence of significant teacher-related variables that hampered student performance in mathematics. Examples include teacher absenteeism and inadequate time allotted for mathematics classes. Findings revealed that parents' inability to provide their children with necessary mathematics learning materials, parents' unwillingness to encourage their children to study mathematics, and parents' failure to monitor their children's progress in mathematics performance were all factors that hampered students' performance. It is recommended that, the creation of an environment that is conducive to learning and teaching, including individual studies by students should be inculcated. To boost their students' interest in mathematics, math teachers should develop the usage of teaching aids and mathematical models. Parents, instructors, the ministry of education, and school administrations should encourage pupils to study mathematics.

Kwakye, D. O., Ofori, K. E., Karim, S., Zacharia, Y., Zakari, Z. & Asemani, E. (2020). Using Abacus and Bundles of Sticks to help Basic Two (2) Pupils to Add and Subtract Three-Digit Numbers: An Action Research at Ghana National College Basic School, Cape Coast, Central Region, Ghana. African Journal of Mathematics and Statistics Studies, 3((5)), 21-37. DOI: <https://doi.org/10.52589/AJMSS/M10ITAHP>

Abstract

The purpose of this study was to use Abacus and Bundles of sticks as Instructional Materials or Teaching Learning Materials (TLMs) to improve the addition of two- and three-digit numbers among Basic Two (2) Pupils of Ghana National College Basic School, Cape Coast, Central Region, Ghana. Action research design was used for the study. Evaluation Test (Pre-Test and Post-Test) were used to gather data on the pupils. The population was thirty-four (34) and the sample used for the study was fourteen (14) pupils. Pre-Test was used to assess the pupil's performance to identify their strength and weakness for the necessary interventions to be used to solve that problem. Post-Test was used to gather results and compare the effectiveness of the use of Abacus and Bundles of stick in solving addition of two- and three-digits numbers in mathematics. Simple percentage count was employed by the researcher to display the results and findings. It was found out from the study that, appropriate materials like Bundles of sticks and Abacus should be encouraged and be used in primary schools more especially at the Lower Primary levels (Early Grade levels) to teach for the pupils to overcome their difficulties in solving addition problems involving two- and three-digits numbers.

Asemani, E., Asiedu-Addo, S. & Oppong, R. A. (2017). The Geometric Thinking Levels of Senior High School Students in Ghana. International Journal of Mathematics and Statistics Studies. Published by European Centre for Research Training and Development UK, Vol 5(No. 3), 1-8. https://www.researchgate.net/profile/Richard-Oppong3/publication/317570630_THE_GEOMETRIC_THINKING_LEVELS_OF_SENIOR_HIGH_SCHOOL_STUDENTS_IN_GHANA/links/5978b91445851570a1bb5a63/THE-GEOMETRIC-THINKING-LEVELS-OF-SENIOR-HIGH-SCHOOL-STUDENTS-IN-GHANA.pdf

Abstract

This study was to measure the Van Hiele's levels of geometric thinking attained by Ghanaian final year (SHS 3) students before leaving School. A quantitative research approach was employed in the study and sample of 200 students randomly selected from the three participated schools. The results showed that 42.5% of the students could not attain any VHGL level at all, 33% of the students attained Van

Hiele's level 1, 22.5% reached level 2, 1.5% reached level 3 and only 0.5% reached level 4. The findings indicated that most of the Ghanaian SHS form 3 students do not attain any level of VHGT.

Acquaye, V.N.A. & Debra, M. (2019). Young but not clueless: exploring children's perception of a better future through creative writing. International Journal of Basic Education Research and Policy (IJOBERP), 2(1), 160-183. Provide the DOI/URL

Acquaye, V.N.A., Addai-Mununkum, R, Acquah, S, & Ananga, E. (2021). The New B.ED. Curriculum and the making of 21st century Teachers in Ghana; perception of UEW teacher-trainees on digital pedagogies. International Journal of Basic Education, Research and Policy, 2(3), 87-104. Provide the DOI/URL

Acquaye, V.N.A. (2022). Childhood Fantasy: Young People's Time Use in Their Imagined Ideal Childhood. Schutter, S., Harring, D. and Bass, L.E. (Ed.) Children, Youth and Time Emerald Publishing Limited, Bingley, (Sociological Studies of Children and Youth, Vol. 30, 103-119. DOI: <https://doi.org/10.1108/S1537-466120220000030006> Is this a book or a journal article?

Abstract

Children's time and how they spend it has been the focus of both scholarly and political interest. This is evident in the various ways in which society models children's time use. This study examines Ghanaian children's fantasy about how they would wish to spend their time. Forty-seven narrative essays written by children between ages 10 and 13 about their imagined ideal childhood is the data for the study. Documentary method was used to analyze the data with the focus on making the implicit meaning explicit. It was observed that children fantasize about spending a lot of time on leisure activities, however, structured social time constraints on children's time like schooling and learning forms a very small part of their fantasy. In addition, they fantasize about lots of changes to school as an education institution and learning as a compulsory activity in childhood. It is argued that the children's aversion to schooling and learning is a system critique and not a dislike to acquiring knowledge.

Keywords

Children, Fantasy, Leisure, School, Learning, Adolescent, Ideal, childhood, Narrative, Diversity, Time use

Joshua-Luther Ndoye Upoalkpajor. (2023). Counselling Adolescents with Somatic Symptom Disorder in Ghana: The Role of Mindfulness-Based Stress Reduction Therapy. International Journal of Advanced Multidisciplinary Research and Studies, 3(1), 910-915. <https://www.multiresearchjournal.com/admin/uploads/archives/archive-1676570436.pdf> Surname first, followed by first initials (should be in lower case)

Abstract

The study aimed at exploring the usefulness of Mindfulness- Based Stress Reduction Therapy (MBSRT) in handling adolescents with significant focus on physical symptoms in the Nanumba North Municipality of the Northern Region of Ghana. The study was guided by three research questions and hypotheses each, to help the researcher. They were all tested at a 0.05 level of significance. The pre-test, post-test, control group and experimental design was used for the study. Three thousand, five hundred and sixty-one (3,561) students, which included all students in junior high school Two (JHS 2) from the twenty public junior high schools in the Nanumba north municipality of the northern region made up the population for the study. Thirty-three (33) students (made up of fourteen (14) males and nineteen (19) females reporting somatic symptom disorder) were selected as the sample size for the study. They were selected from two schools, making use of the multi-stage random sampling method. The researcher adopted “Adolescents Somatic Symptom Scale” (ASSS) and modified it for use. The Cronbach Alpha reliability method `was used to determine the consistency of the reliability which made use of the test items. The reliability of the coefficient obtained was 0.70. The instrument was run on the students first, and thirty-three (33) students who showed significant focus on physical symptoms in the two schools were assigned for treatment to experimental group A (Mindfulness-Based Stress Reduction Therapy), and B (Control Group) randomly. The data collected were scrutinized by the use of descriptive statistics of mean and standard deviation, and inferential statistics of paired t-test sample, One Way Analysis of Variance (ANOVA) and Two-Way Analysis of Covariance (ANCOVA). The findings of the study elicited the fact that there is a significant dissimilarity in the pre-test and post- test of somatic symptoms disorder scores of adolescent students exposed to MBSRT. Also, there was no significant communication outcome on treatment by socioeconomic level. Judging from the findings of the study, it is recommended that counsellors should introduce, encourage and promote Mindfulness-Based Stress Reduction Therapy (MBSRT) in all junior high schools as an effective counselling treatment for adolescents

Amponsah, R. O., Addai-Mununkum, R., Commey-Mintah, P., & Christianah, F., Amponsah, K. D. (2023). Amponsah, R. O., Addai-Mununkum, R., ComPerspectives of Basic School Level Headteachers in Accra Metropolitan Education Directorate about their Job Satisfaction amid the COVID-19 Pandemic. African Journal of Educational and Social Science Research, 11(1), 21-29. DOI: <https://dx.doi.org/10.4314/ajessr.v11i1.3>

Abstract

The study's goal was to investigate the job satisfaction of basic level headteachers in the Accra Metropolitan Education Directorate during the COVID-19 Pandemic. An explanatory sequential methodology was used in this investigation. A purposive sampling technique was also utilized to choose a total of 67 basic school heads, 15 of whom were males and 52 of whom were females. Data on job happiness was collected using the BGSU Abridged Job Descriptive Index. For statistical analysis, descriptive statistics (mean and standard deviation) and inferential statistics (independent samples t-test and one-way between-group analysis of variance) were used. The findings show that basic school headteachers think that their current employment is good and that their current compensation is sufficient to support them. However, they were dissatisfied with their jobs in general. The results demonstrated that gender, level of headship, age differences, as well as marital status, did not have a substantial impact on job satisfaction in general during the COVID-19 pandemic.

Conference/Workshop/Symposia/Seminar with Presentations

Addai-Mununkum, R. (2023, June 6). Cool qualitative tools you can use [Paper presentation]. Rhodes University Institute for the Study of the Englishes of Africa, Makenda, Eastern Cape, Republic of South Africa.

Abstract

Technological advancement has opened avenues for making qualitative research a bit easier. In this seminar, I present on four computer softwares that can aid qualitative research. Topics include: *Using Microsoft Word for dictation and transcription; Using Speak and Write for transcription; Using Taguette for qualitative data analysis and Literature Review; and Managing references with Zotero*. Participants will be exposed to the benefits and affordances of these tools and equipped with skills to begin using them for their research.

Article(s)/Chapters in an Edited Book

Addai-Mununkum, R. (2023). From proselytization to democratization: Tracing the footprints of religion in Ghanaian Basic School Curriculum. In Amoako-Gyampah, A.K., Lundt, B., Agyeman E. A Education in Ghana: History and Politics. Langa RPCIG, Yaode. https://books.google.co.za/books/about/Education_in_Ghana.html?id=MV27zwEACAAJ&redir_esc=y

Abstract

The history of education in Ghana cannot be narrated without recourse to engaging the role of religion in both policy and curriculum practice. After decades of Religious Education (RE) in the basic school curriculum this chapter attempts an introspection that traces RE's footprints in curriculum history, assessing religion's survival as curriculum content through various curriculum reforms to the present. I draw on Michael Apple's politics of official knowledge to theoretically filter significant episodes, while highlighting the role of missions, whose vociferous agitations have created a socio-cultural capital for religion as a learning area in the curriculum. Writing from a qualitative research paradigm, the chapter is composed out of prior studies that relied on interviews, focus groups, and document analysis to generate data. Discourse, content, and thematic analysis of data was done to arrive at findings that point to religion as a contested learning area in the curriculum. Significant milestones of religion in the school curriculum from the origins of Castle schools, through education reforms in 1961, 1987, 2002 and 2019 are highlighted. These milestones have altogether catapulted the gradual transmogrification of the purpose religious studies from single-faith proselytization agenda to multi-faith RE focused on global citizenship education. Besides this retrospective overview, the question of how the study of religion should be positioned in the 21st Century of decreasing spiritual and religious thoughts, crowns this chapter. I argue that a lot more opportunities exist in civic education if RE can be attuned to the needs and interests of the contemporary child.

Published Proceedings of Conferences/Workshop/Symposia/ Seminar

Ali, C. A., Adzifome, N. S., & Asemani, E. (2023). Female Trainee Teachers and Inequality in Mathematics. In In 31st Annual Conference of the Southern African Association for Research in Mathematics, Science and Technology Education (ISBN No. 978-0-6398352-7-3).

Abstract

The issue of inequality in mathematics has lingered for decades and one wonders when we can become satisfied on female participation. With two integrated models, we proposed a two-stage design process to explore female trainee teachers' knowledge and competencies in addressing inequality in mathematics teaching and learning. Samples of 50 female trainees and 200 pupils were involved in this study. Standardized tests were conducted for trainees and pupils to determine the influence of inequality on mathematics teaching and learning outcomes. The results did not only show enormous strengths and weaknesses but also opportunities and threats. Also, the results of the pupils showed that many girls lacked basic knowledge and competencies in mathematics. We therefore concluded that the two models contributed significantly to enriching the teacher trainees' knowledge and competencies in bridging female inequality in mathematics. Consequently, we recommended that stakeholders offer varied assistance, grants and scholarships for female teacher trainees and girls who wish to pursue mathematics professions.

Addai-Mununkum, R. (2023). Ghanaian High School Pidgin English and the quest for a new identity: Antilanguage or Decolonial Practice? In Ian Siebörger University of Rhodes Seminar Series Rhodes University, Makenda, South Africa.

Abstract

Pidgin English is a contact language that is lexically derived from other languages and possesses structurally simplified morphology. In the context of Africa, pidgin is predominantly a West African phenomenon, functioning as a medium of communication among people who have no first language in common. It is spoken in Cameroun, Ghana, and Nigeria where it is on the verge of becoming a creole. While scholarship has examined pidgin as a linguistic phenomenon, less attention has been given to it as a social phenomenon. Contextually situating my qualitative study in Ghanaian high schools, I explore students' acquisition and use of Ghanaian School Pidgin (GhaSPidgin) as a bigger project. For this presentation, I draw on qualitative interview and film language data to describe the features of GhaSPidgin, and to distinguish it from other pidgin varieties. From this premise, I challenge its categorization as a pidgin variety, and as an antilanguage, to argue that GhaSPidgin

embodies the features of African Urban Youth Languages (AUYL). With this understanding, I contend that, viewing GhaSPidgin as a decolonial practice provides space for the appreciation of Ghanaian students' exercise of agency in liberating themselves from global coloniality.

Book

Acquaye, V.N.A. (2022). Toward the Construction of Ghanaian Childhood(s): An Exploration of Ghanaian Children's Perception of Ideal Childhood. [Ph.D. Thesis, Europa-Universität Flensburg], Flensburg. ISBN: SearchWorks Catalog <https://www.zhb-flensburg.de/dissert/acquaye>

Abstract

Children's lives and how they live are mostly laid out for them with very little consideration to their own choices or interests. Most often, the rational is that they are young, inexperienced and vulnerable. A lot of policies are put in place to ensure that children have satisfactory lives. However, all these are done with little consideration to what exactly children themselves want. Most often, research with children concerning their perceptions of life focus on what they want to be in the future as adults thus, very little literature exists on how they want their lives to be as children. This study helps fill the gap on what children want their lives to be as children with the aim of giving them a voice in issues that concern them. Childhood studies theorize children as active social agents whose perspectives and contributions to both their lives and that of other social actors could be invaluable to the society if they are taken seriously. Therefore, childhood studies are grounded in methods which place greater emphasis on the meanings that children attribute to their lives. There are concerns about how best to make their voices heard by reducing to the barest minimum, adults' influences on their perceptions. This calls for particular methods that will put children's views in the fore front of research. To achieve this aim, this study made use of the qualitative reconstructive approach, documentary method, that makes both explicit and implicit meanings form data for analysis. With documentary method, what children say explicitly and how they say it are analyzed to give two levels of meaning with the implicit meaning being knowledge that they are not aware they possess. To achieve the aims of this study, narrative essays about children's fantasy of ideal childhood were collected from 47 children who are between 10 and 13 years old in the Winneba Municipality in Ghana. The documentary method provided evidence that, in their fantasy of ideal childhood, children focus on certain key activities and relationships as fundamental issues. In addition, five orientation frameworks were reconstructed from their implicit knowledge as constructions of Ghanaian childhoods. These orientation frameworks emphasize theories of diversity of childhoods even within the same locality. Finally, the documentary method is recommended as a very effective method for research with children.



REGISTRY

ARTICLES IN JOURNALS

Yambah J.K, Kuunibe N, Laar K, Mensah K. A, Apawu J, Titigah A.B, Saanwie A.S, Sopiimeh E.L. (2022). Exploring the effects of the withdrawal of the capitation policy on Cesarean rates in public hospitals in Ghana: an interrupted time series analysis. *Annales Africaines de Médecine*, 16(1), e4879. DOI: <https://dx.doi.org/10.4314/aamed.v16i1.2>

Abstract

In Ghana, CS rates have increased by 2% since 2014 even though the World Health Organization has called for the procedure only for medically justifiable cases. Provider payment mechanisms such as capitation have been used to moderate CS rates in some settings. We explored the effects of the withdrawal of the capitation policy on the Cesarean Surgery (CS) rate in public primary care hospitals together with vaginal delivery (VD) and antenatal care for women with 4+ visits (ANC4+) rates. Methods. An interrupted time-series analytical design was used to assess the effects of the withdrawal of capitation on selected variables from the secondary District Health Information Management System (DHIMS 2) of public hospitals between January 2015 and December 2019. Results: The results show that after the policy withdrawal, the trend and level of provision of CS and VD were not significantly altered. Significant declining trends of ANC4+ reversed with significant positive trends after the policy removal. Conclusion. We conclude that the withdrawal of the capitation policy may not have impacted the CS rate significantly in public hospitals. Enhanced capitation payment mechanisms and specific policies aimed at limiting CS are needed to curtail the rise in Ghana.

Yambah J.K, Kuunibe N, Atinga R.A and Laar K. (2022). The effects of Ghana's capitation policy on hospital Under-5 mortality in the Ashanti Region. *Ghana Medical Journal*, 56(3), 185-190. DOI: <https://doi.org/10.4314/gmj.v56i3.8>

Abstract

The study estimated the capitation policy's effect on the under-5 mortality (U5MR) rate in hospitals in Ashanti Region. Design: We used an interrupted time series design to estimate the impact from secondary data obtained from the DHIMS-2 database. Monthly under-5 deaths and the number of live births per month were extracted and entered into Stata 15.0 for analyses. The U5MR was calculated by

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dividing the number of live deaths by the number of live births for each of the 60 months of the study. Setting: Health facilities of the Ashanti Region with Data in the DHIMS 2. Intervention: the level and trend of U5MR for 31 months during the Capitation Policy implementation (January 2015 to July 2017) were compared with the level and trend 29 months after the withdrawal of the capitation policy (August 2017 to December 2019). Outcome measures: changes in trend or level of U5MR after the withdrawal of capitation. Main Results: During the capitation policy, monthly U5MR averaged 10.71 \pm 2.71 per 1000 live births. It declined to 0.03 deaths per 1000 live births ($p=0.65$). After the policy withdrawal, the immediate (increase of 0.01 per 1000 live births) and the trend (decline of 0.13 deaths per 1000 live births per month) were still not statistically significant. Conclusion: We conclude that the capitation policy did not appear to have influenced under-5 mortality in the Ashanti Region. The design of future healthcare payment models should target quality improvement to reduce un-der-5 mortalities.



FACULTY OF SCIENCE EDUCATION

ARTICLES IN JOURNALS

Sarpong, E.O., Sedegah, M. M., & Ofosu, K.E. (2022). Factors Contributing to Sports Injuries among Senior High Students Akuapem Municipality. NUGA Scientific Journal, 1(1), 170-176. Provide the DOI/URL

Abstract

Several factors lead to sports injuries and these go a long way to control the prospects of developing most talents in our schools. In exploring the factors contributing to sports injuries among senior high student-athletes, a descriptive cross-sectional survey design was employed. A total of 610 student-athletes were purposely selected for the study to respond to the DEMASS inventory questionnaire to derive their opinion on the factors contributing to sports injuries. The results indicated that physiological factors were considered by S.H.S student-athletes in the Akuapem Municipality as a highly influential factor for sports injury than biological, psychological, and socio-cultural factors. Males perceived biological factors to influence sports injuries more than females. In conclusion, the factors of sports injury contributed only 9% between them on the occurrence of sports injuries in the Akuapem Municipality. Further research is recommended to remedy some of these sports injuries identified in sports competitions.

Aloko, E.A., Ansah, W.E., Apaak D., Sarpong, E.O., Munkaila, S., & Sorkpor, R. S., (2023). Mediating Effect of Physical Activity on Relation between Cardio-respiratory Fitness and Physical Function Capacity of Older Adults. British Medical Journal, 2(1), 1-20. DOI: <https://doi.org/10.1101/2023.06.06.23291026>

Abstract

The ageing process is normally accompanied by several physiological changes like a decline in physical function and increased risk of chronic health conditions. In older adults, maintaining physical function and cardiovascular health is essential for maintaining independence and quality of life. Cardio-respiratory fitness and physical functional capacity (PFC) are two important indicators of physical health in older adults. This study aims to investigate the mediating effect of physical activity (PA) on the relationship between CRF and PFC in older adults. Using quantitative cross-

sectional design, we employed a multistage sampling strategy to recruit 998 older adults from Navrongo for this study. The senior fitness test battery, international physical activity questionnaire (IPAQ) short form for elderly, weighing scale and tape measure were used to collect the data. The findings revealed that, 53.4% and 53.9% of these older adults had reduced PFC and CRF respectively. It was also found that PA partially mediates the relationship between CRF and PFC of the older adults with an indirect effect of CRF on PFC as $\beta = .0030$, $t = 1.579$ $p < .05$, with a direct effect of CRF on PFC, $\beta = .867$, $t = 42.954$, $p < .05$, and the total effect, $\beta = .872$, $t = 43.110$, $p < .05$. We concluded that physical activity partially mediates the relationship between CRF and PFC among older adults in Navrongo. Therefore, there is the need for evidenced-based intervention to promote PA among these older adults to improve their PFC and quality of life.

Aloko, E.A., Munkaila, S., Apaak D., Sarpong, E.O., Sorkpor, R.S., & Ansah, W.E. (2023). Body Weight and Cardio-respiratory Fitness: Predictors of Physical Function Capacity among Older Adults. *British Medical Journal*, 1(1), 1-23. DOI: <https://doi.org/10.1101/2023.06.05.23291006>

Abstract

Ageing is an inevitable part of human life, thus, everyone may grow and become old. The ageing process is characterized by reduced physical activity, accumulation of fat and loss of muscle mass resulting in weight gain and reduced cardio-respiratory function that leads to loss of physical function capacity. Therefore, the purpose of this study was to determine the extent to which body weight and cardio-respiratory endurance predict physical functional capacity of older adults in Navrongo, Ghana. This study employed quantitative cross-sectional design, using a multistage sampling method with 998 aged (60yrs+) participants. The senior fitness test battery, international physical activity questionnaire (IPAQ) short form for elderly, weighing scale and tape measure were used to collect the data. The independent t-test and multiple regression were applied to analyse the data. The results indicated that physical activity levels were generally minimal among both men and women, but women were more overweight, had reduced cardio-respiratory function and physical function capacity. It is concluded that, body mass index and cardio-respiratory endurance are significant predictors of physical function capacity among older adults in Navrongo. It is recommended that, education on the health benefits is provided and regular participation in physical activity is done to promote regular exercise among these older adults. A longitudinal study is needed to explore the moderation- mediation role of physical activity on the relation of cardio-respiratory function and physical function capacity among older adults.

Oppong, E. K. & Hanson, R. (2019). 2-(pentadynyl-1-3)-5-(3, 4-dihydroxy-butynyl-1)-thiophene and stigmasterol from the chloroform extract of the root of *Blumea aurita* var. *foliolosa*. *International Journal of Applied Chemistry*, 15(1), 21-26. <http://www.ripublication.com>

Abstract

A shade-dried pulverised sample of the whole root of *Blumea aurita* var. *foliolosa* was exhaustively extracted with cold chloroform. Chromatographic technique was used to purify two compounds. Spectroscopic methods and other analytical techniques identified the compounds as 2-(pentadynyl-1, 3)-5- (3, 4- dihydroxy-butynyl-1)-thiophene and stigmasterol, a plant sterol.

Hanson, R. (2017). Unearthing conceptions about types of chemical bonding through the use of tiered worksheets- A case study. *International Journal for Cross-Disciplinary Subjects in Education*, 8(2), 3112-3122. <http://www.infonomics-society.org>

Abstract

The use of tiered worksheets and interpretive procedures to find out teacher trainees' conceptions about basic types of chemical bonds are presented in this paper. The research was carried out with 71 first year Chemistry education teacher trainees purposely sampled from two teaching universities. Their answers were analysed in order to understand their knowledge structures about chemical bonding. Results from the activity indicated that more than 88% of the chemistry education teacher trainees had some misconceptions about chemical bonding, which stemmed from their idiosyncratic interpretations about the nature of matter. The requirement for justification of answers which was embedded in the second tier unearthed these misconceptions. Some suggestions were made for other effective teaching approaches to enhance the trainees' conceptual understanding of chemical bonds.

Mak-Mensah, E., Sam, A. & Hanson, R. (2018). Using cooperative learning to enhance pupils' understanding about the solar system in the Agortime-Ziope District of Ghana. *European Journal of Basic and Applied Sciences*, 5(1), 18-28. <http://www.idpublications.org>

Abstract

Cooperative learning is the instructional use of small groups of learners so that they work together to maximize their own and each other's learning. This study investigated the use of cooperative learning to enhance the performance of upper primary pupils in science. A mixed method approach with a quasi-experimental

design was used. The access population was upper primary pupils from Kortsrala and Takuve D/A primary schools in the Agortime-Ziope district of the Volta region of Ghana with a sample size of 32 pupils. The sample was divided into experimental and control group with each group consisting of sixteen pupils. A pre-test administered at the beginning of the study, showed that both groups had about the same entry point. The experimental group was taught using the cooperative learning method while the control group was taught using the old-fashioned way of teaching. At the end of the four weeks treatment, both groups were post-tested. A whole class interview session was conducted with the experimental group after the post test. Post-test results showed that pupils taught with the cooperative learning approach exhibited high academic performance and thus prove that cooperative learning enhances pupil's own understanding of concepts. It also showed that using collaborative techniques such as paired or group modelling go further than simply motivating students through other verbal, coercive and independent (individual) work approaches.

Sam, A., Eminah, J. K., Hanson, R. & Raheem, K. (2019). Teacher trainees' alternative conceptions about some aspects of coordination chemistry: A case study at the University of Education, Winneba- Ghana. European Journal of Research and Reflection in Educational Sciences, 7(1), 20-28. <http://www.idpublications.org>

Abstract

Students' alternative conceptions of some aspects of coordination chemistry namely nomenclature and geometry, geometrical isomerism, bonding and colours in complexes differ greatly from scientific concepts. This study investigated the causes of students' alternative conceptions and how they express these conceptions in coordination chemistry. A case study design within the Model of Educational Reconstruction (MER) approach was used. The access population were all third-year chemistry pre-service teacher trainees in the University of Education, Winneba (UEW)-Ghana with sample size of fifteen (15) students. A pre-test administered at the beginning of the study in a class of 5 groups, comprising 3 students each over eleven weeks showed that students had alternative conceptions about some aspects of coordination chemistry. The students' alternative conceptions were derived from two-tiered questions, written tasks and inorganic formulae of some coordination chemistry complexes. The results among others indicated that the causes of the students' alternative conceptions emanated from their inability to distinguish between 2D and 3D visualisation and the misunderstandings of some inorganic chemistry terms. The study recommended that the coordination chemistry content at UEW has to be well connected in order to give the students a broader basis for conceptual change through meaningful interventional approaches such as Science Writing Heuristics (SWH) and Modelling and Modelling Skills (MMS).

Hanson, R. (2020). How gender-friendly constructivist approaches facilitate the development of STEM skills. *International Journal for Cross-Disciplinary Subjects in Education*, 11(2), 4281-4285. <http://www.infonomics-society.org>

Abstract

Students tend to perform well in free space learning environments as they are able to put forth ideas that teachers can harness. This study reviewed an integrated STEM constructivist, gender-friendly style that enabled the implementation of students' ideas, transformation of learning environments, instruction, and assessment procedures into meaningful events for lifelong skills among 103 students, 39 of whom were females, in a qualitative case study design that employed the action research approach with interpretive undertones. It used the theoretical framework of phenomenography. The main question that guided the study was to find out about the outcome of integrated STEM constructivist, gender-friendly strategies in lessons and how it affected STEM concept formation and cognitive gains. Tools that were used to gather data were real-world concept-based micro projects and microscience activities. Guided conversations were employed to triangulate data. It was found that it was possible to integrate gender constructivist strategies into lessons to enhance participants' STEM skills acquisition and conceptual gains, especially among females.

Asante, J. N. & Hanson, R. (2018). Exploring Ghanaian children's conservation of number. *Journal of Information Technologies and Lifelong Learning*, 1(2), 28-35. <http://www.infonomics-society.org>

Abstract

The study was based on Piaget's theory of Cognitive development and the main aim of the study was to find out if Piaget's theory on children's number conservation at the concrete stage holds for Ghanaian early children. Fifty-four (54) kindergarten and lower primary school children were randomly selected from three (3) public and two (3) private schools purposively selected from schools in the Winneba Municipality. The procedure used was mainly interview method using some of Piaget's tasks to test for conservation of number. The 7-8 years old were identified to be conservers of number than the 3-6 years old. Generally, the results supported Piaget's theory of cognitive development where the older children (7-8 years) performed better than the younger children (3-4 years; 5-6 years) at the number tasks. There was also no significant difference on how the public and private school children performed on the number task. In conclusion, the results of this study agree with Piaget's theory of Cognitive development that the concrete operational stage marks the development of conservation and that the Ghanaian children tested were no different in their cognitive stage as with the Swiss children used by Piaget.

Safo-Adu, G. & Hanson, R. (2019). Practices and knowledge about environmental sanitation and hygiene among urban dwellers in Gomoa East District, Ghana. *European Journal of Earth and Environment*, 6(1), 1-11. <http://www.idpublications.org>

Abstract

This study assessed the practices and knowledge about environmental sanitation and hygiene among urban dwellers in Gomoa East District in the Central Region of Ghana. A cross sectional survey research design was adopted for the study. Random sampling technique was used in selecting 360 inhabitants in three urban communities. A structured questionnaire was used for data collection. Descriptive and inferential statistics were used to analyse the data. The study showed that a significant number of respondents (80.8%) had high knowledge about environmental sanitation and hygiene than respondents (2.5 %) with low knowledge. Respondents who had good standard practices regarding environmental sanitation and hygiene were 43 % greater than respondents with poor standard practices. Chi-square test results showed that no association exist between sex and knowledge ($X^2 = 2.32$, $p = 0.31$) and age and knowledge ($X^2 = 2.03$, $p = 0.36$). However, there was significant association between occupation and knowledge ($X^2 = 42.10$, $p = 0.00$). A Pearson product-moment correlation result showed that there was no relationship between standard practices and knowledge about environmental sanitation and hygiene ($r = 0.058$, $p = 0.274$). Major findings of the study lead to a conclusion that even though inhabitants' knowledge about environmental sanitation and hygiene was high there was a clear gap between knowledge and actual practices hence the District Environmental Health and sanitation Department in collaboration with Environmental Protection Agency should implement effective behavioural change communication strategy among the urban dwellers to translate knowledge into actual practice.

Hanson, R. (2014). Enhancing conceptual understanding through individual micro chemistry experimentation and motivation in a Ghanaian senior high school. *Advances in Scientific and Technological Research*, 1(2), 65-73. <http://www.projournals.org/ASTR>

Abstract

This study investigated the use of individual learning approach through micro chemistry experimentation in a senior high school (secondary) school to increase students' motivation and understanding of some chemistry concepts. Two groups of second year chemistry students in a Winneba senior high school, designated as experimental and control groups, participated. The experimental group ($N=32$) worked individually while the control group ($N=34$) worked in groups of four as pertains in most secondary schools. The research design was a pre-test-post-test equivalent intact class design. Concept tests, a practical class questionnaire and a

motivation questionnaire were used in gathering data for the study. Findings indicated that the micro chemistry approach had the potential to enhance the understanding of chemistry concepts during instruction, especially, if students worked individually to build their own concepts. There was no significant difference in motivation among the students in both groups.

Hanson, R., Acquah, S. (2014). Investigating undergraduate chemistry teacher trainees' understanding of laboratory safety. *Advances in Scientific and Technological Research*, 1(1), 56-64. <http://www.projournals.org/ASTR>

Abstract

Laboratory safety and safety rules are necessary to ensure the safety of all laboratory users. It is also to ensure that users do not harbour fears of uneventful circumstances so that they all work freely for best results. The study investigated Ghanaian first year university chemistry teacher trainees' understanding of safety rules and symbols which go to create a safe work environment. Data was purposively collected from 111 undergraduate chemistry teacher trainees of the University of Education, Winneba, Ghana. The findings indicated that only 31% of trainees understood the safety rules. 45% successfully interpreted safety symbols. However, only 12% interpreted both rules and symbols correctly. 12% is too small a quota to let go without remediation. A semi-structured interview suggested that trainees hardly paid attention to warning symbols during experimental processes. These findings intimate that teachers will have to make the teaching of warning symbols and laboratory rules an introductory part of their laboratory instruction curriculum.

Hanson, R. (2016). Ghanaian teacher trainees' conceptual understanding of stoichiometry. *Journal of Education and e-learning*, 3(1), 1-8. DOI: <https://doi.10.20448/journal.509/2016.3.1/509.1.1.8>

Abstract

Chemical stoichiometry is a conceptual framework that encompasses other concepts such as the mole, writing of chemical equations in word and representative form, balancing of equations and the equilibrium concept. The underlying concepts enable students to understand relationships among entities of matter and required amounts for use when necessary. Success in this area of chemistry depends mainly on a student's understanding of the concepts of the mole. An interpretive study on trainees' conceptual understanding of chemical stoichiometry was carried out among 78 teacher trainees in their second year of study. The study comprised a combination of quantitative and qualitative interpretation of responses provided by trainees to stoichiometric questions. The interpretation indicated that their learning of stoichiometry was basically through the use of picket fence (factor

label), undefined strategies and algorithm. The trainees were found to have more persistent problems with conceptual interpretation as they were not able to fully translate word problems into mathematical equations regardless their algorithmic underpinnings. Neither did they understand fully, the law of conservation of matter. Qualitative findings were found to be consistent with quantitative outputs.

Hanson, R., Kwarteng, T. A. & Antwi V. (2015). Undergraduate chemistry teacher trainees' understanding of chemical phenomena. *European Journal of Basic and Applied Sciences*, 2(3), 8-14. <http://www.idpublications.org>

Abstract

Knowledge about periodic trends enables students to understand and explain chemical phenomena which they encounter in everyday life and in formal settings such as in chemical activities in school laboratories. The case of first year undergraduate students' understanding of chemical phenomena was assessed through an interpretive study. The study revealed that almost half of Ghanaian students at the entry point of tertiary teacher education had several alternative conceptions about periodicity in general and chemical phenomena in particular. The highest alternative conception was found to be on the electronegativities within a group of atoms and how they changed as well as how they affected polarity.

Hanson, R. & Kwarteng, T. A, (2016). Using concept mapping to remediate teacher trainees' understanding of chemical phenomena - before and after. *International Journal of Scientific Research in Science and Technology*, 2(4), 214-221. <http://www.ijisrt.com>

Abstract

Researchers have shown interest in how beginning chemistry teacher trainees can improve on their technological pedagogical content knowledge so as to be able to engage their students in concept-based and reflective activities. This is a task that trainees have to build up on their own by first mastering their content knowledge. This article focuses on 29 first year teacher trainees' understanding of chemical phenomena and how their understanding could be improved through concept mapping. An intervention was designed to enhance their basic conceptions upon which other concepts could be built. We analysed concept maps on linkages of periodic properties and how they affect chemical bonding. Their submissions were analysed based on three categories of conceptual understanding. The results showed that their levels of conception improved after the concept mapping intervention.

Hanson, R., Twumasi, A. K., Aryeetey, C., Sam, A. & Adukpo, G. (2016). Secondary school students' conceptual understanding of physical and chemical changes. *Asian Journal of Education and Training*, 2(2), 44-52. DOI: <https://doi.10.20448/journal.522/2016.2.2/522.2.44.52>

Abstract

In recent years, researchers have shown an interest in understanding students' own ideas about basic chemical principles and guiding them through innovative ways to gain conceptual understanding where necessary. This research was a case study designed to assess 50 first year high school students' conceptual understanding about changes in matter, with interpretive underpinnings. A diagnostic probe was administered to find out if discrete particles could be used to differentiate chemical changes from physical changes and to unravel the different conceptual interpretations that students had. Submissions obtained from the students were classified on levels of conceptions, and analysed using frequency counts and percentages, after which an interview was conducted to gain a deeper insight into their unscientific submissions. Findings from the study indicated that only a few students had difficulties in distinguishing between physical and chemical changes. These few did not associate the changes in states with associated physical and chemical properties, as was expected at their level. Neither did they base their explanation on the breaking nor formation of bonds, nor with changes in the constitutions of entities. They overwhelmingly intimated that physical changes were reversible whilst chemical changes were not. About 38% of participants who provided correct definitions for physical and chemical changes in two of the probes could not assign reasons for them. However, almost 79% of the participants showed an appreciable knowledge of types of changes that occur in chemistry. The adopted diagnostic probe and interview were useful in identifying students' alternative conceptions about changes in chemistry. Diagnostic probes are recommended as a pre-requisite for conceptual change strategies.

Hanson, R., Bobobee, L. H., Kwarteng, A. K., & Antwi, V. (2015). Designing micro chemistry experimentation for teacher trainees in a university. *European Journal of Research and Reflection in Educational Sciences*, 3(5), 14-20. <http://www.idpublications.com>

Abstract

Micro chemistry experimentation has come to reduce the usual traditional experimentation through miniature activities. In addition, it has reduced activity time and the cost of resources significantly and yet provided personal hands-on experiences for learners. This study presents the design of micro chemistry experimentation for some quantitative and qualitative inorganic chemistry topics for first year undergraduate teacher trainees as well as to introduce a motivating way

to teach and conduct chemistry activities. It basically set out to explore the designed low-cost practical approach that could contribute to improved laboratory practice in Ghana, in view of resource, time, and space constraints in a teaching institution. Overall findings showed that the micro chemistry approach made chemistry lessons interesting, interactive, and enabled learners to acquire many learning skills by themselves.

Hanson, R. & Sakyi-Hagan, N. (2019). Understanding teacher trainees' reasoning patterns about the formation and description of chemical compounds. *Science Education International*, 30(2), 105-115. DOI: <https://doi.org/10.33828/sei.v30.i2.4>

Abstract

In this study, diagnostic worksheets adopted from the Royal Society of Chemistry and microscale chemistry activities were employed to investigate teacher trainees' understanding of chemical compounds. The framework for the study was hinged on the constructivist theory. Participants in this study were 36 1st-year undergraduate teacher trainees of the Departments of Chemistry and Physics Education in the University of Education, Winneba. One group was taught through the use of worksheets, while the other was engaged through traditional exercises, but all participated in microscale activities. A pre-test to assess homogeneity of the groups showed a common performance entry point. It revealed that trainees had language-based problems, conceptual misunderstanding, and poor interpretation of chemical formula. Post-test and retention test showed significant differences between groups. The group that used the worksheets, though simple, outperformed the traditional group. Thus, the study concluded that the use of diagnostic worksheets affects trainees' understanding of principles required for the formation of chemical compounds and enhances retention ($t = 20.6$; $p < 0.05$). This study was significant because trainees must gain exposure on how to develop sound scientific concepts through innovative ways to help their own students to break the vicious cycle of chemical misconceptions.

Hanson, R. (2018). Teacher trainees' interpretations of chemical stability and chemical reactivity. *International Journal for Cross-Disciplinary Subjects in Education*, 9(14), 3906-3916. <http://www.infonomic-society.org/ijcdse>

Abstract

This paper reveals teacher trainees' over-reliance on the octet model. It assesses the nature and possible origins of these conceptions. One hundred and thirty-eight teacher trainees in a teaching university, who were purposely selected, participated in this case study. Instruments used in gathering data were worksheets and focus group

interviews. Data obtained were analysed quantitatively and qualitatively. Records of the interviews were transcribed after thematic descriptions. Findings showed that majority of the trainees relied heavily on the full shell concept model, which they imbibed from teachers, and so confused the chemical reactivity framework with that of chemical stability. This led them to pay attention to irrelevant features to the negligence of other authentic reasons in their assigned task. The octet model also led the trainees to reduce the relevant number of propositions that they could have considered as possibilities in differentiating between models. These findings will add to existing knowledge among the science learning community as they are relevant to educators interested in conceptual development and students' learning progressions. Remediation was recommended to enable the trainees to form proper mental models of the concept of chemical stability and its application through innovative constructivist teaching strategies.

Twumasi, A. K. & Hanson, R. (2018). Assessment of hands-on activities on students' achievement and attitudes towards chemical bonding. *International Journal of Innovative Research & Development*, 7(1), 114-121. DOI: <https://doi.org/10.24940/ijird/2018/v7/i1/JAN18053>

Abstract

The study assessed the efficacy of hands-on activities on students' academic achievement and attitude in learning ionic and covalent bonds in a senior high and a technical school in Ghana. The sample size for the study was 30 and comprised of 22 males and 8 females who were purposively sampled for the study. The main instruments used to collect data were tests, interviews and questionnaire. The various hands-on activities employed included writing Lewis dot structures, drawing diagrams for ionic bonds and covalent bonds, tug of war, modelling with ball and sticks as well as calculation of electro negativity differences. Statistical analyses showed that students scored significantly higher scores ($t = -6.32$; $p < 0.05$) in the post-test than in the pre-test. Also, a gain of 3.83 was obtained for the post test over the mean score of the pre-test. This confirmed that the treatment strategy significantly improved students' performance in learning chemical bonding through the interactive hands-on activities. The study also revealed that hands-on learning increased students' interest to read chemistry, facilitated understanding and recall of chemical concepts, made lesson more exciting and led to positive motivational outcomes. Furthermore, the activities engaged students, made them critical thinkers, and enhanced their learning skills.

Hanson, R. & Oppong, E. (2014). Chemistry teacher-trainee's interpretations of safety rules and symbols- A case study in Ghana. International Journal of Innovative Research & Development, 3(11), 284-286. <http://www.ijird.com>

Abstract

The purpose of this paper was to sensitise laboratory instructors and teachers on the need to take seriously the teaching of laboratory rules and safety symbols to students. It reports on the understanding that 34 chemistry undergraduate teacher trainees have about laboratory safety rules and symbols in a study. The research was a mini survey which employed the exploratory design. A questionnaire was used to gather data to assess the situation. Analysis of the data revealed that 23 (67.65%) of the participants had a fair understanding of safety rules while 24 (70%) could interpret safety symbols. The wrong interpretations were however very bizarre. It is recommended that teacher and lab instructors make the teaching of laboratory procedures a prerequisite topic before the commencement of experimental work in the laboratory.

Hanson, R. (2022). Adopting sustainable micro chemistry activities for conceptual and financial benefits. African Journal of Chemical Education, 12(1), 35-70. <http://www.faschem.org>

Abstract

This paper examines how the use of micro chemistry equipment can support effective practical lessons in schools to minimize cost, save the environment, and promote contextualization of theory. It particularly assesses the relevance of scaling down activities to sustainable development as well as gains in scientific conception, reduced exposure to hazardous chemical, reduced waste generation, and implicit financial gains. Through a case study, data were obtained from two different groups of students totalling 115 through laboratory activities, tests, questionnaires and observation schedules to ascertain the potential of the micro chemistry equipment in four micro labs. Findings indicated that participants found the micro chemistry labs to be safe, required the use of minimal chemicals as compared to conventional equipment in standard laboratories, generated less waste, and enhanced their understanding of theoretical concepts. Implications were discussed and recommendations made from the findings.

Nartey, E. & Hanson, R. (2021). The perceptions of senior high school students and teachers about organic chemistry: A Ghanaian perspective. *Science Education International*, 32(4), 331-342. DOI: <https://doi.org/10.33828/sei.v32.14.8>

Abstract

The purpose of the study was to determine the perceptions that senior high school (SHS) chemistry students, and teachers have about organic chemistry as well as to compare organic chemistry topics that are difficult for students and teachers. Simple random sampling (lottery) and purposive sampling methods were used to select a sample of 100 SHS students who studied elective chemistry and ten chemistry teachers. The research instruments used to collect data for this study were the “organic chemistry perceptions questionnaire for students” and “organic chemistry perceptions questionnaire for teachers.” Descriptive statistics (frequencies and percentages) were used to analyze the data collected. The findings revealed that these SHS students have a fairly positive perception of organic chemistry while their teachers had a highly positive perception of organic chemistry. Preparation and chemical reactions of alkenes, preparation and chemical reactions of alkynes, structure and stability of benzene, reactions of benzene, comparison of reactions of benzene and alkenes, petroleum, polymers and naming of alkanes, and structural isomerism were perceived by students as difficult to understand. The rest of the Ghanaian SHS organic chemistry topics (26 out of 34 topics) were perceived as easy to understand by students. Furthermore, the teachers perceived all the SHS organic chemistry topics as easy to teach with the exception of reactions of benzene. The insights gained about teachers’ and students’ perceived difficult organic chemistry topics in this study imply that teachers’ perceptions and how these are communicated to students can have significant effects on learning. The authors believe that both teachers and learners could benefit from this increased awareness of perceptions about difficulties in teaching and learning organic chemistry. They therefore suggest that further studies into how teachers’ perceptions influence their teaching and consequently their students’ experiences are carried out. In addition, in future research, a diagnostic test based on the topics in the SHS organic chemistry syllabus could be added to ascertain whether the perceived difficult topics are actually difficult for students to answer questions on. This would help teachers to separate perceived difficulties from the actual difficulties (realities) and be able to address them in their lessons.

Hanson, R. & Asante, J. N. (2014). An exploration of experiences in using the hybrid MOODLE approach in the delivery and learning situations at the University of Education, Winneba, Ghana. *Journal of Education and Practice*, 5(12), 18-23. <http://www.iiste.org>

Abstract

This article summarises experiences in using the hybrid approach in delivering courses online in a teaching university in Ghana. The rationale for moving face-to-face classes online was in response to a university strategic plan to encourage lecturers to use educational technologies to enhance teaching and learning. The design and implementation of the hybrid approach were based on Salmon's (2002) five-stage model for e-moderation as well as Gagne's (1965) nine events of instruction. The study used qualitative methods to gather information from six lecturers and 168 students who were all conveniently sampled. Students were of the opinion that the use of the hybrid approach enhanced their ICT competencies as well as their engagement with their course content. Lecturers also had a positive opinion about the hybrid online teaching approach. It was recommended that more courseware be deployed to enable students' access as many courses online as possible to enhance their learning and also to help solve the problem of Massification in our Universities.

Agbeko, D. T., Hanson, R. & Kumabia, F. K. R. (2021). Exploring colleges of education science tutors' views on differentiated instruction: A case study in the Volta Region of Ghana. *Indiana Journal of Arts & Literature*, 2(7), 30-44. <https://indianapublications.com/journal/IJAL>

Abstract

The study was to explore the viewpoints of science tutors working at colleges of education located in the Volta Region of Ghana regarding the implementation of differentiated instruction. Case study methodology, which is qualitative in nature, was used as the design strategy for this study. The research utilised a method known as purposive sampling to collect data from a group of 32 science tutors working in colleges of education in the Volta Region of Ghana. These science tutors were chosen for the study since they maintained constant direct instructional contact with students and had prior teaching experience both inside and outside of colleges. To acquire data, interviews were conducted. Different science tutors were discovered to have varying levels of understanding about topics, learning styles, learner interest, learner variety, methodology, and lesson planning. The findings also demonstrated that most science teachers who did not implement differentiated instruction in their classrooms were aware of the strategy, but they chose not to implement it in their classes for a variety of reasons, including a lack of available time, the difficulty of the strategy, and an excessive amount of existing work. The findings also demonstrated that most of the scientific tutors did not make use of the feedback provided by the assessments they administered to direct their instruction.

According to the science tutors, the students were always provided with the marking schemes so that they could self-correct. The findings of the classroom observation revealed that these instructors do not teach in a way that caters to the various needs of their students. Most participants continue to subscribe to conventional classroom teaching practises that are predicated on a cookie-cutter approach that has been shown to be unsuccessful. The study's results show that tutoring universities should teach student teachers how to use differentiated education and hold seminars for tutors on how to use differentiated education.

Sam, A., Niebert, K., Hanson, R., & Aryeetey, C. (2016). Fusing scientists' and students' conceptual correspondences to improve teaching of metal complex isomerism in higher education- An educational reconstructive process. International Journal of Academic Research and Reflection, 4(1), 54-64. <http://www.idpublications.org>

Abstract

The study was conducted to explore Scientists' and Students' perspectives on metal complex isomerism. These correspondences formed a powerful grain for conceptual change in content-oriented instruction for 15 third year chemistry major students at the University of Education, Winneba-Ghana. The interpretive case study was used to explore students' responses on geometrical isomers of complexes. Based on the researchers' interpretation and the Model of Educational Reconstruction (MER), a clarification of geometrical isomerism in coordination chemistry content structure was developed. The generated conceptions from four (4) university-level textbooks and students, primarily informed this clarification process. These conceptions on metal-complex isomerism (geometrical) from scientists and students were brought into meaningful correspondences. All data were analysed by qualitative content analysis, addressing students' reasoning during a ten (10) week class sequence. The research afforded students access to use their constructed knowledge rather than being passive recipients of scientist-presented knowledge. The study discussed the relevance of geometrical isomerism in Higher Education (HE).

Kwarteng, T. A., Hanson, R., Nartey, E., Sam, A. & Quayson, C. (2021). Teacher trainees' alternative conceptions about intermolecular forces. International Journal of Innovative Science and Research Technology, 6(12), 18-23. <http://www.ijisrt.com>

Abstract

The study assessed the alternative conceptions that first-year teacher trainees have about intermolecular forces. Descriptive research design was adopted to examine the current situation as it exists. The sample involved 82 first-year chemistry major teacher trainees in the University of Education, Winneba. Purposively sampling

technique was used to select students for the study. This is because most of them performed poorly in a pre-assessment test organised for them. Test was the main instrument for data collection. Simple percentages were used to analyse the data. The results indicated that 26% and 37% of the teacher trainees had alternative conceptions on Ion –dipole interaction and London dispersion forces, respectively. Also, more than 50% of the teacher trainees demonstrated alternative conceptions on hydrogen bonding. Some alternative conceptions identified in this study included: interactions between oppositely charged species give ionic bonds, London dispersion force occurs within a single molecule rather than between molecules, Covalent –ionic interaction is the major intermolecular force that exists in different I₂ molecules, and the perception that any molecule which contains ‘O’ and ‘H’ forms hydrogen bonding irrespective of their position in the molecule (especially with organic structures used in the study). Another was that Hydrogen bonding only exists between ‘O’ and ‘H’ but not between N-H and F-H. It is recommended that science educators should develop appropriate interventions to improve students learning in intermolecular forces.

Sakyi-Hagan, N. & Hanson, R. (2022). Gender differences in performance in integrated science among pre-service science teachers: A case of a university in Ghana. *East African Journal of Education and Social Sciences*, 3(6), 1-7. DOI: <https://doi.org/10.46606/eajess2022v03i06.0231>

Abstract

While pre-service science teachers are an important group of stakeholders in a nation’s pursuit of scientific literacy, scientific development and technological advancement in this modern era, this study sought to determine any gender differences in performance in Integrated Science among third year pre-service senior high school science teachers at the University of Education, Winneba, Ghana using the descriptive research design. The study used the sample of 168 students in five courses taken by the students at that level. The study employed the SPSS version 22.0 software to conduct an independent samples t-test so as to determine differences in performance between male and female students. Evidence from this study proves no gender gap in integrated science achievement among pre-service secondary school science teachers of the Department of Integrated Science Education of the University of Education, Winneba. The study recommends the need to conscientize females on the need to put up more positive attitudes towards the study of science and related courses, especially the physical sciences.

Adjei, F., Hanson, R., Sam, A., & Sedegah, S. (2022). The use of collaborative approaches on students' performances in redox reactions. *Science Education International*, 33(2), 163-170. DOI: <https://doi.org/10.33828/sei.v33.i2.4>

Abstract

This study investigated the use of collaborative instructional approaches on form two science students' performance in redox reactions. The sample for this study consisted of 106 science students from Winneba Senior High School in Ghana. The sample was selected from two intact classes in the school. After a pre-test organized for both classes, the class with the lower average score was assigned as the experimental group and the other class assigned the control group. Interviews, questionnaires, and tests were used as the main instruments to collect data for the study. The reliability of the questionnaire, pre-test, and post-test items which were determined using Cronbach alpha ranged from 0.76 to 0.80. A collaborative learning text-oriented instruction was applied in teaching the experimental group whereas conventional approach was used in teaching the control group. It was also found that a number of the students who took part in the study had wrong notions about redox reactions. The findings showed that there was a significant difference in performance between the experimental and control groups. The experimental group performed better in the post-test than the control group. It is recommended that chemistry teachers in Ghana should employ the collaborative learning approach in teaching chemistry to enhance the students' learning

Agbeko, D. T., Yale, J., & Hanson, R. (2023). Science tutors' knowledge of differentiated instruction in colleges of education in Volta Region, Ghana. *Journal for Research in Applied Sciences and Biotechnology*, 2(1), 115-129. DOI: <https://doi.org/10.55544/jrasb.2.1.16>

Abstract

The purpose of the study was to explore science tutors' knowledge of differentiated instruction in the Colleges of Education in the Volta Region of Ghana. The study employed sequential explanatory design. The participants were 32 science tutors from Colleges of Education in the Volta Region of Ghana, who were purposively selected on the basis of having direct instructional contacts with students all the time and their teaching experiences within and outside colleges. Questionnaire, Rating Scale and Interview were used to collect data. It was found that science tutors have different knowledge on content, learning style, learner interest, learner diversity, process, product and lesson planning. The findings also revealed that majority (80%) of science tutors who did not differentiate instruction in their classrooms have the knowledge of differentiated instruction but their failure to make use of DI was due to scarcity of time, complex nature of DI, high level of workload. The results also revealed that, majority (80%) of the science tutors did not use their assessment

feedback to guide their instruction. These science tutors said marking schemes were always given to the students for self-correction. The results from classroom observation showed that these tutors do not teach to meet the diverse needs of learners. Majority of the participants still hold to traditional classroom teaching strategies based on one size-fits-all approach which proved to be ineffective. The study recommended that mentoring universities should organize workshops on the differentiated instructional for tutors and mount course in DI for student teachers.

Quayson, C., Kwarteng, T. A., Koranteng, E., & Hanson, R. (2022). Chemistry teacher trainees' use of molecular models in learning about spiro and bicyclic compounds. *Science Education International*, 33(3), 291-295. DOI: <https://doi.org/10.33828/sei.v33.i3.4>

Abstract

The study diagnosed chemistry teacher trainees' difficulties in naming and writing structures of spiro and bicyclic compounds. The case study design was conducted in a constructivist environment to enhance chemistry teacher trainees' ability to construct, represent, and interpret the structural formulae of spiro and bicyclic compounds. Purposive sampling technique was employed to select 126 1st-year chemistry teacher trainees from University of Education, Winneba for the study. The results revealed that chemistry teacher trainees had difficulties in naming and writing structural formulae of spiro and bicyclic compounds. However, through the effective use of molecular model kits in teaching naming and writing structures of spiro and bicyclic compounds, these chemistry teacher trainees became conscious of IUPAC rules for naming and writing spiro and other cyclic compounds. At-test conducted indicated that a statistical significance difference existed between students' performance before the implementation of the intervention and after the intervention. It is recommended that chemistry teachers should adopt the use of molecular model kits in teaching concepts of organic nomenclature.

Hanson, R. (2022). Integrating the Natural and Social Sciences in a Ghanaian University: An Idea for Curriculum Orientation. *International Journal for Infonomics*, 15(1), 2082-2087. DOI: <https://doi.10.20533/iji.1742.4712.2022.0217>

Abstract

The time has come for the natural and social scientists to integrate their disciplines for the acquisition of skills to solve real life challenges. This study was premised on the belief that the principles of systems thinking, humanitarianism, sustainability, security, and love, which feature prominently in the social sciences could be integrated into the natural sciences. The underlying theory for a possible approach was considered to be the social constructivist theory, as it could transform learners'

ideas about the intersection of natural and social sciences in an active, motivating, collaborative, and non-discriminatory manner. An instrument used to gather data on this idea was a semi-structured guided conversation. Data gathered was interpreted qualitatively. Findings showed that the process to transform the teaching of natural and social sciences was feasible to enable learners to acquire transferrable and concept skills for lifelong living. Participants became aware of the possibility of applying scientific knowledge to solve some humanitarian challenges. They observed that the integration would enable the development of attributes such as love for each other and the environment, tolerance, patience, critical thinking, reflective and analytical skills, if the proposition is considered for curricula implementation. The conversations corroborated findings from other studies that perceived that science integrated in the social sciences and vice versa was feasible. It was concluded that, exposing Ghanaian students to real life experiences in a safe environment through chemical and social principles could make them appreciate the chemistry concepts in the social sciences, and vice versa, for a better world.

Ankudze B., & Samlafo, B.V (2022). Repeated Use of *Cyperus esculentus* Tubers, Towards Sustainable Green Synthesis of Silver Nanoparticles. *BioNanoScience*, 12, 1150-1157. doi.org/10.1007/s12668-022-01032-7. <http://doi.org/10.1007/s12668-022-01032-7>.

Abstract

For green synthesis to be a sustainable approach for preparing nanoparticles, efforts must go into the search of methods that can guarantee effective and efficient use of bio resources. Most conventional approaches require fresh bio-reducing and stabilizing agents for every synthesis cycle. This study demonstrates that *Cyperus esculentus* tubers can serve as efficient bio-reducing and stabilizing agents' source for multiple syntheses of silver nanoparticles. The simple approach for extracting reducing agent from *Cyperus esculentus* tubers reported in this study offers the possibility to reuse the tubers for multiple syntheses. Reductants from *Cyperus esculentus* were obtained by soaking the tubers in deionized water for 24 hours, without the need of crushing. Addition of silver ions to the extract resulted in a rapid formation of silver nanoparticles. Effects of sunlight exposure, temperature, and pH on the formation of silver nanoparticles were studied. Silver nanoparticles were obtained in seconds under sunlight exposure, minutes at basic conditions, and hours under room and elevated temperatures. In addition, the *Cyperus esculentus* tubers could be used multiple times for the preparation of silver nanoparticles, thus serving as a sustainable bio reducing and stabilizing agents' source for the preparation of silver nanoparticles. The results from this study offers a simple, convenient, and economical approach for sustainable green synthesis of silver nanoparticles.

Article(s)/Chapters in an Edited Book

Sakyi-Hagan, N., Quansah, R. E. & Hanson, R. (2019). Microscale science equipment as a conceptual and attitudinal change tool towards sustainable development. In Opara, J. An Outlook on human capacity building and development: A handbook of research in honour of Professor Ibrahim Njodi. University of Maiduguri Press, Maiduguri, Nigeria. <http://www.unimaid.edu.ng>

Abstract

Science educators have for years, stressed on the importance of science activities to help students understand the theory and practice of science, as it influences everything about the life of an individual to that of an entire community. This chapter would like to do a conceptual and attitudinal analysis to assess the possibilities that the mass adoption of the small-scale equipment could afford Ghanaian students. Apart from the unavailability of science equipment and risks factors involved in using them, lack of electricity, water and conventional fragile equipment (some of which require training before use) have been found to be other factors that limit teachers' desires to organise practical activities for their students. This study seeks to present the conceptual and attitudinal changing nature of adopting micro-scale science equipment by analysing six laboratory activities from first year under graduate science courses in Ghana. The main objective would be to create an awareness of the existence and possibility of using micro-scale equipment in science practical activities among teacher trainees, science educators and curriculum developers of science education in Ghana. This is likely to ensure that meaningful, safer, sustainable and concept-based science practical activities are performed in schools.

Hanson, R. & Hanson, C. (2022). Catching learners early in humanitarianism and sustainable principles through chemistry. In Y. Koumpourou, A. Georgoulas, & G. Kremmyda Modern challenges and approaches to humanitarian engineering. IGI Global, UK. DOI: <https://doi.10.4018/978-1-7998-9190-1.ch012>.

Abstract

The purpose of this chapter is to describe a possible best practice to teaching chemistry from a humanitarian engineering perspective. The interest in teaching chemistry by focusing on humanitarian engineering arises from the economic and environmental concerns that the country of this study faces, some of which are poverty, climatic changes, food crisis, inadequate healthcare, water crisis, and pollution. As an educator, there is an interest in educating future generations to be able to cope with environmental changes that face their countries and the world at

large. This exposition of a possible new approach with appropriate pedagogies that is presented here may be an answer that underdeveloped, developed, and emergent economies may adopt to close the gap between themselves and other industrialised nations.

Hanson, R. & Hanson, C. (2023). A better world through the integration of sustainability and humanitarianism in chemistry education. In C. A. Shoniregun, V. Argyropoulous, M. A. Plummer Inclusive education and lifelong living. Infonomics Society, UK. DOI: <https://doi.10.20533/978-1-913572-45-7>.

Abstract

This chapter has eulogised on sustainability, sustainability development, education for sustainable development, humanitarianism and humanitarian engineering, to a small extent. The need to create sustainable communities of sustainable-literate and humanitarian-literate citizens through chemistry education has been emphasised. The case of graduate students in teacher education who undertook contextualised mini-projects was presented. Statements made by graduates in teacher training education on the integrated programme was positively overwhelming and goes to prove that that teaching about sustainability and humanitarian principles need not be taught as standalone courses but could be integrated into existing curricula with accompanying appropriate pedagogies to yield positive results. The summarised lesson which was enacted by students illustrated how it was possible to embed sustainability and humanitarian principles in a simple chemistry lesson to enable future teachers to imbibe the desired concepts to help create a positive change to save the world from humanitarian challenges through scaled down practical activities.



INSTITUTE FOR EDUCATIONAL RESEARCH AND INNOVATION STUDIES

ARTICLES IN JOURNALS

Kyei-Arthur, F., Agyekum, M. W., Afrifa-Anane, G. F., Larbi, R. T., & Kisaakye, P. (2023). Perceptions about COVID-19 preventive measures among Ghanaian women. *PloSone*, 18(4), 1-14. DOI: <https://doi.org/10.1371/journal.pone.0284362>

Abstract

Though the advent of COVID-19 vaccines has significantly reduced severe morbidity and mortality, infection rates continue to rise. Therefore, adhering to COVID-19 preventive measures remains essential in the fight against the pandemic, particularly in Africa, where vaccination rates remain low. However, the perceived risk associated with COVID-19 and public education and awareness campaigns has waned over time. COVID-19 vaccine hesitancy is consistently high among women globally. This study, therefore, assessed the facilitators, and barriers to adherence to COVID-19 preventive measures. A qualitative descriptive study was conducted among Ghanaian women. Twenty-seven in-depth interviews were conducted with women in the Greater Accra and Ashanti regions. All interviews were audio-recorded and transcribed verbatim into English. The data were analysed using NVivo 10 software. While some participants found the use of face masks as the easiest, others found it as the most difficult. In addition, institutional and policy decisions such as access to water and the use of public transport impacted individual level adherence to preventive measures. In conclusion, the fight against COVID-19 is not over; hence public education and the provision of facilities that would enhance compliance with preventive measures should continue to be prioritised.

Agula, C., Henry, E. G., Asuming, P. O., Obeng-Dwamena, A., Toprah, T., Agyekum, M. W., ... & Bawah, A. A. (2022). Postpartum contraceptive initiation and use: Evidence from Accra, Ghana. *Women's Health*, 18, please provide issue number , 1-11. <https://pubmed.ncbi.nlm.nih.gov/36476194/>

Abstract

Postpartum contraceptive use reduces unintended pregnancies and results in better health outcomes for children and women. However, there is a dearth of knowledge on postpartum contraceptive use in Ghana, particularly among women in low-income urban settings. To shed light on strategies that might enhance access to postpartum family planning services in low-income urban settings, we examined contraceptive use among postpartum women in Accra, Ghana, at 1, 3, 6, and 12 months following the birth and the methods used. The predictors of modern contraceptive use in the 12-month postpartum period were also examined.

Methods: Data come from a cross-sectional survey conducted in 2018 among 624 women aged 16-44 years who reported giving birth in the past 13-31 months prior to the interview. We generated descriptive statistics to examine the prevalence of contraceptive use among postpartum women at 1, 3, 6, and 12 months after birth. We further estimated a binary logistic regression to examine the predictors of modern contraceptive use at 12 months postpartum.

Results: Forty percent of postpartum women never used any contraceptive method during 1 year after birth and of those who used a method, 40% relied on traditional methods. Moreover, 29% of women started using a method the immediate 1 month post-birth. Results further show that postpartum modern contraceptive uptake was positively associated with higher education, having more live births, and being currently in a union.

Conclusions: Findings highlight that there may be opportunities to improve the quality of counseling during antenatal and postnatal care visits by clients to ensure fully informed choices regarding postpartum contraception. Community outreach by health providers/promoters or similar models should be promoted in low-income population settings to educate postpartum women on modern contraceptive use. Women who plan to use traditional methods should be provided with information on the consistent and correct use of these methods.

Keywords

Accra; Ghana; contraception uptake; low-income urban settings; postpartum women.

Kushitor, M., Henry, E. G., Obeng-Dwamena, A. D., Agyekum, M. W., Agula, C., Toprah, T., & Bawah, A. A. (2022). Covert Contraceptive Use amongst the urban poor in Accra, Ghana: experiences of health providers. *Reproductive Health*, 19(1), 1-12. DOI: <https://doi.org/10.1186/s12978-022-01516-5>

Abstract

An estimated one-third of women in Ghana use contraceptives without the knowledge of their partners, a phenomenon known as Covert Contraceptive Use (CCU). Most research on CCU to date has focused on individual women to the neglect of the role of health system. This study explores CCU in urban poor communities of Accra, Ghana, from the experiences and perspectives of health providers.

Methods: Qualitative in-depth interviews were conducted with health care providers in both the public and private sectors at multiple levels, from the community clinic to the tertiary hospital, to gain insights into the strategies women use and the ways in which the health system supports the practice of CCU.

Results: Five major thematic areas emerged: use of easily concealed-methods, discrete-access-and-information-keeping, time-of-day, non-verbal-communication and use of relationships. The study further revealed that fear, mistrust, shyness, myths, and misperceptions regarding contraceptives explain CCU among women in the communities that the providers serve.

Conclusion: Importantly, disclosure of methods used by providers without women's consent could potentially lead to violent outcomes for both women and the providers. Our results highlight the pivotal role that providers play in confidentially supporting women's choices regarding the use of contraceptives.

Kyei-Arthur F, Kyei-Gyamfi S, Agyekum MW, Afrifa-Anane GF, & Amoh BA. (2022). Parents' and guardians' acceptability of COVID-19 vaccination for children in Ghana: An online survey. PloSone, 17(8), e0272801. DOI: <https://doi.org/10.1371/journal.pone.0272801>

Abstract

Few studies have examined the intentions of parents and guardians to vaccinate their children younger than 18 years against COVID-19 in Ghana. Parents are the decision makers for children younger than 18 years; therefore, we examined parents' and guardians' intentions to accept the COVID-19 vaccines for their children. An online survey was conducted among 415 parents and guardians in Ghana. The Statistical Package for Social Sciences version 25 was used to analyse the data. We found that 73.3% of parents/guardians would allow their children to be vaccinated against COVID-19. The binary logistic regression analysis shows that parents/guardians with Senior High School education, those who believed COVID-19 could not be cured, and those who agreed and those who neither agreed nor disagreed with the statement "once the vaccine is available and approved, it would be safe" were less likely to accept COVID-19 vaccine for their children. Also, parents/guardians who neither agreed nor disagreed that "the best way to avoid the complications of COVID-19 is by being vaccinated", those who agreed that "I am of the notion that physiological/natural community is better compared to vaccine-induced immunity" and "I believe the vaccine programming may be likened to the new world order" were less likely to accept COVID-19 vaccine for their children. There is a need for public health practitioners to intensify education on the benefits and side effects of COVID-19 vaccines, as well as provide regular and up-to-date information about vaccines' safety to parents and guardians.

Afrifa-Anane GF, Larbi RT, Addo B, Agyekum MW, Kyei-Arthur F, Appiah M, Clara OA, & Ignatius GS. (2022).) Facilitators and barriers to COVID-19 vaccine uptake among women in two regions of Ghana: A qualitative study. PloSone, 17(8), e0272876. DOI: <https://doi.org/10.1371/journal.pone.0272876>

Abstract

Although COVID-19 vaccines are available, evidence suggests that several factors hinder or facilitate their use. Several studies have found gender differences in COVID-19 vaccine uptake, with women less likely to vaccinate than men in many countries, including Ghana. These studies, however, have primarily been quantitative. This study used a qualitative approach to examine the facilitators and barriers to vaccine uptake among women in Ghana. Using a cross-sectional descriptive qualitative research design, 30 women in the Greater Accra and Ashanti regions of Ghana were conveniently sampled and interviewed using a semi-

structured interview guide. Fifteen (15) interviews were conducted in each region. The data were transcribed verbatim and analysed thematically using QSR NVivo version 10 software. Among the key factors that facilitate COVID-19 vaccination are the desire to protect oneself and family against COVID-19, education about COVID-19 vaccines, seeing others receive the COVID-19 vaccine, and vaccine being cost-free. On the other hand, long queues at the vaccination centres, fear of side effects, misconceptions about the vaccines, and shortage of vaccines were the main barriers against COVID-19 vaccination. The study results show that individual, institutional, and vaccine-related factors facilitate or hinder COVID-19 vaccination among women. Addressing these factors need continuous comprehensive health education, and ensuring vaccine availability at vaccination sites will improve women's uptake of the COVID-19 vaccines.

Afrifa-Anane GF., Kyei-Arthur F., Agyekum M.W., & Afrifa-Anane E.K. (2022). Factors associated with comorbidity of diarrhoea and acute respiratory infections among children under five years in Ghana. PloSone, 17(7), e0271685. DOI: <https://doi.org/10.1371/journal.pone.0271685> no italics for issue number

Abstract

Globally, childhood mortality is an important public health concern. In Ghana, both diarrhoea and acute respiratory infections (ARIs) are among the top five causes of morbidity and mortality among children under five years old (CU5). Yet, there is a paucity of studies on the comorbidity of diarrhoea and ARIs in CU5 in Ghana.

Aim: This study sought to examine factors associated with comorbidity of diarrhoea and ARIs among CU5 in Ghana.

Methods: The Ghana Demographic and Health Survey (GDHS) 2014 was used for this study. A total of 932 CU5 who had at least one morbidity were included in the study. Binary logistic regression was used to predict the factors associated with comorbidity among CU5.

Results: The prevalence of comorbidity of diarrhoea and ARI among CU5 was 11%. Factors including unimproved source of water, unimproved main floor material, age of child, and initiation of breastmilk were significantly associated with comorbidity of diarrhea and ARI. Improved source of water (AOR = 0.42; 95% CI = 0.22–0.78; $p = 0.01$) reduces the likelihood of having comorbidity than unimproved source of water. Children aged 36–47 months were less likely (AOR = 0.36; 95% CI = 0.14–0.93; $p = 0.04$) to have comorbidity than those aged 48–59 months. Also, improved floor materials (AOR = 0.45; 95% CI = 0.22–0.95; $p = 0.03$) reduces the likelihood of having comorbidity than unimproved floor materials. Children breastfed within the first day of birth were more likely (AOR = 1.66; 95% CI = 1.01–2.72; $p = 0.04$) to have comorbidity than those breastfed immediately after birth.

Conclusion: Policymakers and health practitioners should consider risk factors such as age of child, initiation of breastfeeding, unimproved floor material, and unimproved water supply in the design of interventions to reduce morbidity and mortality associated with comorbidity of diarrhoea and ARI among CU5.

Agyekum, M. W., Henry, E. G., Kushitor, M. K., Obeng-Dwamena, A. D., Agula, C., Opoku Asuming, P., ... & Bawah, A. A. (2022). Partner support and women's contraceptive use: insight from urban poor communities in Accra, Ghana. *BMC Women's Health*, 22 (1), 1-10. DOI: <https://doi.org/10.1186/s12905-022-01799-7>

Abstract

Despite the benefits associated with contraceptive use, there is a low prevalence of contraceptive use in sub-Saharan Africa and Ghana. Previous studies have partly and consistently attributed the low prevalence of contraceptive use to partner opposition. However, little is known about the influence of men in contraceptive related choices of their partners, particularly within the context of urban poverty. This study examines the influences of partners on women's contraceptive choices.

Methods: The study utilized a cross-sectional household survey data of 1578 currently married women and women in a union of reproductive ages 16–44 years. Women who were pregnant and those trying to be pregnant were excluded from the analysis. The dependent variables for the study were current use of any contraceptive method, types of contraceptive methods and types of modern contraceptive methods. The independent variable for the study was a woman's report of partner support in contraceptive related choices. A binary logistic regression model was used to examine the associations between partner support in contraceptive related choices and contraceptive use of women.

Results: The results of the study show that partner support of contraceptive related choices has a significant influence on contraceptive use of women. Women who indicated support from their partners were more likely to be current users of any contraceptive method, yet were less likely to use modern contraceptive methods.

Conclusion: The study highlights the need to involve men in family planning programs and research, as well as educating them on the various contraceptive modern methods and the side effects.

Agyekum, M. W., Codjoe, S. N., Dake, F. A., & Abu, M. (2022). Is Infant birth weight and? mothers perceived birth size associated with the practice of exclusive breastfeeding in Ghana? *PloSone*, 17(5), e0267179. DOI: <https://doi.org/10.1371/journal.pone.0267179>

Abstract

Despite widespread advocacy for exclusive breastfeeding, and the associated benefits of exclusive breastfeeding for both infants and mothers, there is low prevalence in both developed and developing countries. Additionally, although several studies have been conducted on exclusive breastfeeding, very few of such studies have linked birth weight and birth size to exclusive breastfeeding. This study seeks to examine the influence of birth weight and birth size on exclusive breastfeeding.

Methodology: This study adopted a sequential explanatory mixed method approach using both quantitative and qualitative methods. The quantitative approach used cross-sectional data from the 2014 Ghana Demographic and Health Survey (GDHS) and the qualitative data from interviews with exclusive breastfeeding mothers from two health facilities in La Nkwantanang Municipal Assembly in Accra, Ghana. Logistic regression analysis was used to examine whether infants birth weight and mothers perceived birth size are associated with the practice of exclu-

sive breastfeeding while the qualitative data provided further insights into the findings from the quantitative analysis.

Results: Majority (85%) of the infants in the study were of normal birth weight while 52% of the infants were perceived by their mothers to be of small birth size. The prevalence of exclusive breastfeeding was found to be 54.8%. The birth weight of infants and mothers' perceived birth size were found to be significant predictors of exclusive breastfeeding. Infants of normal birth weight (OR = 7.532; 95% CI: 2.171–26.132) and high birth weight (OR = 6.654; 95% CI: 1.477–29.978) were more likely to be exclusively breastfed compared to low-birth-weight infants. Similarly, infants perceived to be of normal birth size were more likely (OR = 1.908; 95% CI: 1.058–3.441) to be exclusively breastfed compared to infants perceived to be of small birth size. The findings from the qualitative analysis show that birth weight rather than birth size influence mothers' decision to practice exclusive breastfeeding.

Conclusion: The findings of the study underscore the relevance of infant birth weight and perceived birth size in the practice of exclusive breastfeeding and highlights the need to incorporate both actual measurement of birth weight, and perception of infant's birth size into policies targeted at exclusive breastfeeding. There is the need for deliberate targeted efforts at women who deliver infants of low birth weight and women who perceive their children to be of small birth size to practice exclusive breastfeeding.

Agyekum, M. W., Codjoe, S. N., Dake, F. A., & Abu, M. (2022). Enablers and inhibitors of exclusive breastfeeding: perspectives from mothers and health workers in Accra, Ghana. *International breastfeeding journal*, 17(1), 1-15. DOI: <https://doi.org/10.1186/s13006-022-00462-z> Don't italicized issue number

Abstract

Despite the health and economic benefits of exclusive breastfeeding, there is evidence of a decline globally and in Ghana. Previous studies addressing this problem are mostly quantitative with only a few of such studies using qualitative or mixed methods to examine the predictors, benefits, ways of improving and managing exclusive breastfeeding, and the challenges associated with exclusive breastfeeding from the perspective of exclusive and nonexclusive breastfeeding mothers, and health workers. This study employs the health belief model to examine the experiences of mothers and health workers regarding exclusive breastfeeding to fill this

gap in the literature.

Methods: A cross-sectional qualitative study involving in-depth interviews was conducted among health workers and mothers attending child welfare clinic at two polyclinics in Madina, Accra-Ghana in 2019. Purposive sampling was used to select health facilities and participants for the study. Twenty participants comprising ten exclusive breastfeeding mothers, six non-exclusive breastfeeding mothers and four health workers were interviewed for the study. The data were analyzed based on emerging themes from inductive and deductive coding.

Results: The decision to practice exclusive breastfeeding was based on mothers' work, advertisement on exclusive breastfeeding and education on breastfeeding provided by health workers. Insufficient flow of breast milk, pressure from family and friends, and insufficient breast milk for infants were among the reasons for discontinuing exclusive breastfeeding. The factors that help improve exclusive breastfeeding include eating healthy food and breastfeeding on demand, while counselling and monitoring, restricting advertisement on infant formula and granting maternity leave for breastfeeding mothers were identified as factors that can facilitate the practice of exclusive breastfeeding.

Conclusion; Different levels of experience affect and shape exclusive breastfeeding practice in Ghana. The decision to practice exclusive breastfeeding, as well as the challenges and strategies employed in managing exclusive breastfeeding, emanates from mothers' personal experiences and interactions with institutional factors. In view of this, there should be counselling on the management of challenges associated with exclusive breastfeeding and provision of accurate information on exclusive breastfeeding to enable mothers' practice exclusive breastfeeding.

Kyei-Arthur, F., Agyekum, M. W., & Afrifa-Anane, G. F. (2021). The association between paternal characteristics and exclusive breastfeeding in Ghana. *PloSone*, 16 (6), 1-15. DOI: <https://doi.org/10.1371/journal.pone.0252517>

Abstract

Studies have shown that partners play an influential role in exclusive breastfeeding practice and that they can act as either deterrents or supporters to breastfeeding. However, there are limited studies on the influence of partners' characteristics on exclusive breastfeeding in Ghana. This study examined the association between partners' characteristics and exclusive breastfeeding in Ghana.

Methods: This cross-sectional study used data from the 2014 Ghana Demographic and Health Survey. Infants less than 6 months old (exclusively breastfed or not) with maternal and paternal characteristics were included in the study. A total of 180 participants were used for the study. A binary logistic regression was used to examine the influence of partners' characteristics on exclusive breastfeeding.

Results: Partners' characteristics such as education, desire for children, religion, and children ever born were associated with exclusive breastfeeding. Mothers whose partners had primary education (AOR = 0.12; CI 95%: 0.02–0.93; $p = 0.04$) were less likely to practice exclusive breastfeeding compared to those whose partners had no formal education. Also, mothers whose partners desired more children (AOR = 0.20; CI 95%: 0.06–0.70; $p = 0.01$) were less likely to practice exclusive breastfeeding compared to those whose partners desire fewer children.

Conclusion: Improving EBF requires the involvement of partners in exclusive breastfeeding campaigns/programmes. A more couple-oriented approach is required by health practitioners to educate and counsel both mothers and partners on the importance of exclusive breastfeeding in Ghana.

Agyekum M. W, Frempong Afrifa-Anane G, Kyei-Arthur F, Addo B. (2021). Acceptability of COVID-19 vaccination among health care workers in Ghana. *Advances in Public Health*, 2021, 1–8. DOI: <https://doi.org/10.1155/2021/9998176> Please provide volume and issue numbers

Abstract

Because health care workers are a reliable source of health information, their acceptance or rejection of COVID-19 vaccines can influence the general population's uptake of COVID-19 vaccines. In this study, we sought to determine the acceptability of COVID-19 vaccines among health care workers in Ghana. Using a cross-sectional design, we collected data from 234 health care workers through a self-administered online survey from 16 January to 15 February 2021. Descriptive, bivariate, and multivariate analyses were performed using STATA version 15., the findings revealed that 39.3% ($n=92$) of health care workers intended to receive the COVID-19 vaccines. Factors such as sex (AOR =0.451; CI 95% 0.240–0.845; $p = 0.013$), category of health care workers (AOR=2.851; 95 CI%: 1.097–7.405; $p=0.031$), relative being diagnosed with COVID-19 (AOR=0.369; CI 95% 0.145–0.941; $p=0.037$), and trust in the accuracy of the measures taken by the government in the fight against COVID-19 (AOR=2.768; CI 95%: 1.365–5.616; $p=0.005$) proved to be significant predictors of the acceptability of the COVID-19 vaccine. Concerns about the safety of vaccines ($n=93$, 65.5%) and the adverse side effects of the vaccines ($n=23$, 14.8%) were identified as the main reasons why health care workers would decline uptake of COVID-19 vaccines in Ghana. self-reported

low intention of health care workers in Ghana to accept COVID-19 vaccines necessitates an urgent call from the Government of Ghana and other stakeholders to address health care workers' concerns about the safety and adverse side effects of COVID-19 vaccines, as this would increase vaccine uptake. Interventions must also take into consideration sex and the category of health care workers to achieve the desired results.

Mensah, R. O., Frimpong, A., Acquah, A., Babah, P. A., & Dontoh, J. (2020). Discourses on conceptual and theoretical frameworks in research: Meaning and implications for researchers. *Journal of African Interdisciplinary Studies*, 4(5), 45 – 55. Please provide DOI/URL

Abstract

This article critically discusses, the relationship between conceptual framework and theoretical framework drawing on their differences and similarities. The article has made it very clear that whereas the theoretical framework is drawn from the existing theoretical literature that you review about your research topic, a conceptual framework is a much broader concept that encompasses practically all aspects of your research. The latter refers to the entire conceptualisation of your research project. It is the big picture, or vision, comprising the totality of research. Methodologically, the paper used systematic and experiential literature review to draw supporting scholarly literature by authorities in the field and made inferences, sound reasonings and logical deductions from these authorities. The primary aim of this paper is to help researchers and students to understand the convergence and the divergence of theoretical and conceptual frameworks in order to appropriately be applied in research and academic writing discourses. Understanding the conceptual framework affects research in many ways. For instance, it assists the researcher in identifying and constructing his/her worldview on the phenomenon to be investigated. Also, it is the simplest way through which a researcher presents his/her asserted remedies to the milieu he/she has created. In addition, this accentuates the reasons why a research topic is worth studying, the assumptions of a researcher, the scholars he/she agrees with and disagrees with and how he/she conceptually grounds his/her approach. Paying attention, to the theoretical framework and its impact on research, it can be mentioned that theoretical framework provides a structure for what to look for in the data, for how you think of how what you see in the data fits together, and helps you to discuss your findings more clearly, in light of what existing theories say. It helps the researcher to make connections between the abstract and concrete elements observed in the data. In conclusion, both theoretical framework and conceptual framework are good variables which are used to inform a study to arrive at logical findings and conclusions. It is therefore recommended by researchers that; a good theoretical framework should be capable of informing the concepts in a research work.

Ofosuhene, C., Onyame, E. A., & Acquah, A. (2023). Educational support systems for teenage mothers in public basic schools in the Ajumako Enyan Esiam District of the Central Region of Ghana. *Quest Journal of Research in Humanities and Social Science*, 11(6), 138-148.
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Abstract

The purpose of the study was to explore educational support systems for teenage mothers in public basic schools in the AjumakoEnyanEsiam District of the Central Region of Ghana. We employed qualitative study which was based on phenomenology. The population of the study was teenage mothers and some selected heads of the various schools where the teenage mothers were schooling. The snowballing and purposive sampling procedure was used to select 5 teenage mothers and 4 heads of schools respectively. In all, a total of 9 participants were interviewed for the study. All participants were met in their various schools for the interviews. The main instrument for data collection for the study was semi-structured interview schedule. The interview data were transcribed, coded, and analysed thematically. The thematic analysis was done based on the data transcribed and the research questions. The findings of the study showed that challenges student-mothers face as they re-enroll into the formal public basic school system were difficulty in concentrating on their studies, financial constraints, absenteeism, stigmatization, and lateness to school. Finally, the study showed that educational support systems available to participants as they re-enroll in school were; financial support, provision of stationary, remedial lessons, and provision of counseling services. Based on the findings, the following recommendations were made; Since teenage mothers are still desirous of pursuing their career ambitions, all necessary support in terms of financial and social assistance should be made available in our various schools for these mothers. Policy makers, non-governmental organization and corporate bodies should all come on board to contribute their quota to achieving this feat.

Ntebi, J., Boakye-Yiadom, M., & Acquah, A. (2022). Post-graduate students' experiences of global engagement in the University of Cape Coast. *Gombe Journal of Education*, 5(1), 162-175.
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Abstract

This study investigated post-graduate students' experiences of global engagement at the University of Cape Coast. A case study design was employed for the study. A sample size of 30 post-graduate student respondents from the Institute for Educational Planning and Administration, French Department and the Department of Economic Studies were selected through the snowball sampling technique from the current population of 109 graduate students who had participated in global

engagement programmes. A semi-structured interview guide was used for the data collection. The data was qualitatively analyzed using thematic analysis. The findings of the study revealed that global engagement programmes exposed students to the culture of other countries in the world. However, students who participate in global engagement programmes are very selective in adopting foreign cultures. It was recommended that facilitators should organise programmes like sports, cultural dance, and inter-quiz competitions to bridge the gap between host-country nationals and foreign students' cultures. This programme would help students to interact among themselves.

Adomako, E. A., Boakye-Yiadom, M., & Acquah, A. (2022). Do internship educational programme and motivation of teachers affect school performance? Empirical evidence from selected senior high schools in the Ashanti region of Ghana. *African Journal of Educational Management, Teaching and Entrepreneurship Studies*, 7(2), 39-60. Please provide DOI/URL

Abstract

The purpose of the study was to investigate the extent to which the internship educational programme and motivation of teachers influence the effect of soft skills of teachers in senior high schools in the Ashanti region on the performance of the schools. The quantitative research involving explanatory design involved the survey of 215 teachers of senior high schools in the Ashanti Region of Ghana using a structured questionnaire. Data was analysed using both descriptive and inferential statistical analytical techniques. The inferential statistical tools included OLS hierarchical multivariate regression method, correlational analysis and Kendall's non-parametric test. The result showed that soft skills of teachers in senior high schools in the form of communication, teamwork, professionalism, leadership, critical thinking, and problem-solving all positively influence the performance of the schools. The educational training programme for teachers in senior high schools in the form of internships positively and significantly improves the performance of schools. Motivational programmes for teachers in the form of career development in senior high schools positively and significantly affect the performance of the schools. The educational training programme in the form of an internship for senior high school teachers positively moderated the effect of communication and informational managerial skills on the performance of senior high schools. The motivational support for teachers in the form of career development positively moderated the effect of communication and professionalism skills on the performance of senior high schools. The factors perceived to inhibit the soft skills development of senior high school teachers were inadequate training on soft skills, lack of integrating soft skills in teaching, absence of well-communicated job descriptions, inadequate leadership competencies and grooming, inadequate infrastructure and technology,

inadequate support from the school, inadequate support of policy and many others. The researchers of this study recommend school support for soft skills development, policy support for soft skills development, and training and workshop on soft skills development.

Boafo, F. A., Boakye-Yiadom, M., & Acquah, A. (2022). Service delivery to students at Cape Coast Technical University, Ghana. *African Journal of Educational Management*, 23(2), 1-37 Please provide DOI/URL

Abstract

Bureaucratic procedures have been found to have negative impact on services delivered to students. Bearing in mind the adverse effects of bureaucratic procedures in public services, this study used the descriptive research design and examined the nature of the services provided by authorities of the Cape Coast Technical University (CCTU). The census sampling procedure was used to include 390 students in five schools and 52 administrators of Cape Coast Technical University. A 60-item and 62-item questionnaires were used for collecting data from students and administrators, respectively. Interviews were also conducted to obtain information from the respondents. The results revealed that, to large extent, the system for providing services to students was challenged by inadequate human and logistical capacity and as a result there were delays in service delivery. It is therefore recommended that the authorities of the Cape Coast Technical University should work with all the nine (9) administrative management principles of maintaining adequate operational capacity levels, effective use of resources, mounting development-oriented objectives, using modern equipment, encouraging worker-participation, implementing sectional accountability, assessing sectional transparency, motivating its staff and retention of experience workers.

Abstract

The purpose of this study was to evaluate gender differences in the variables that influence the adoption of e-learning in an academic environment. Literature on gender differences in e-learning adoption and usage seems to be very limited and hazy. Hence, the need for this research study. The study was based on the hypothesis that factors such as system quality, information quality, and service quality influence the behavioural intention to use an e-learning platform (Moodle LMS), which in turn influences actual Moodle usage. The study made use of the SmartPLS application. The Structural Equation Model (SEM) technique was used to analyse the interactions between the components of the proposed model from the viewpoint of 540 responses. Both males' and females' LMS usage intentions were shown to be significantly influenced by system quality and service quality. In addition to this finding, information quality showed a statistically significant influence on males' LMS use intentions while not affecting the LMS use intentions

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of females. This study contributes to the dearth of research that exists on gender differences in the adoption of e-learning in developing nations that have placed a strong emphasis on the use of e-learning technologies. E-learning adoption theory is bolstered by this study, which empirically confirms that the DeLone and McLean model is applicable in a new setting. Keywords: Developing Country, E-learning, Gender Difference, MultiGroup Analysis, Moodle.



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