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*Corresponding author: Yaw Owusu-Agyeman, Registry Department, Ghana Technology University College, PMB 100 Accra North, Accra, Ghana
E-mail: yowusu-agyeman@gtuc.edu.gh

Reviewing editor:
Kris Gritter, Seattle Pacific University, USA

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EDUCATION POLICY | RESEARCH ARTICLE

Investigating the determinants of adults' participation in higher education

Yaw Owusu-Agyeman^{1*}

Abstract: This study investigates the determinants of adult learners' participation in higher education in a lifelong learning environment. The author argues that the determinants of adult learners' participation in higher education include individual demands, state and institutional policy objectives and industry-driven demands rather than demographic factors in the Ghanaian context. Framed along an interpretive paradigm, the study sought to examine the underlying principle for adult learners' participation in higher education in Ghana and juxtaposing their views with those of policy-makers and managers of higher education institutions. Using an explanatory research design and a mixed method of gathering and analysing data from respondents in two structurally diverse universities, the study concludes that industry-driven factors play important role in the decisions of adult learners to enrol in Higher Education Institutions.

Subjects: Adult Education and Lifelong Learning; Curriculum Studies; Higher Education

Keywords: lifelong learning; access; participation; adult learners; interpretivist paradigm

1. Introduction

Education in Africa dates back to the mercantile era preceding colonisation where the traditions of the society had in-built training mechanisms to introduce the young ones to the norms, values and culture of the society. Similarly, learning was an integral part of the indigenous educational system in Africa because many Africans believed that the acquisition of knowledge was necessary for

ABOUT THE AUTHOR

Yaw Owusu-Agyeman is a fellow of the Higher Education Academy (FHEA), UK, the head of Examinations and Records Unit, Ghana Technology University College and an external researcher at the Centre for Higher Education and Adult Learning, Stellenbosch University. He holds a PhD in Curriculum Studies from Stellenbosch University and his dissertation focused on increasing resource and knowledge support for adult learners in the telecommunications and energy sectors of Ghana. This article was developed from a conference paper that was presented at the 8th Higher Education Reform Workshop that was held at the University of Humboldt in 2011. The article adds to the broad discussion of reforming higher education through the widening of access for adults and by elucidating the rationale for adult participation in higher education.

PUBLIC INTEREST STATEMENT

This study investigates the rationale for adults' participation in higher education. While several studies have been conducted to either assess the implications of widening participation or developing the knowledge and skills of adult learners in HEIs, very little have been done to investigate the rationale for their increasing participation. This study argues that theoretically, although demographic factors are necessary considerations for adults' participation in higher education in middle income countries such as Ghana, industry-driven demand factors greatly influence enrollment rates. Additionally, the study showed that, socio-political and individual demand factors also provide sufficient reasons for the increasing enrollment rates of adults in HEIs. The author provides justification for the inclusion of industry-driven demand factors as essential consideration for determining adults' participation in higher education.

human existence, especially in the area of economic empowerment and social cohesion (Omolewa, 2002). Among the benefits of learning to the African people in those days were: its comprehensive nature, its ability to integrate the people, solve problems, create employment, create self-reliance and contribute to the development of community spirit and healthy living (Avoseh, 2000; Omolewa, 2002). Today, lifelong learning in indigenous Africa has evolved to include the following: relevance; responsiveness; respect for the dignity and integrity of all irrespective of age; gender; creed and color; equality; equity; socio-economic and political justice (Omolewa, 2002).

Adult learning in Ghana (formerly called Gold Coast) dates back to the seventeenth century when the Dutch established schools in their Forts and Castles to teach the indigenes how to read and write (Foster, 1971; Graham, 1971). The goals of individuals who sought education then was to rise to the level in the society where they could be considered as able to engage in the political decision-making process of the country which was similar to the European system of governance (Nwauwa, 1997, p. 1). Today, not much has been achieved with respect to widening participation among post-secondary school leavers and what this means is that individuals will later on in their lives desire to obtain higher education qualification. By the end of 2010, only 23% of Ghanaians had enrolled in a tertiary programme (The World Bank, 2013) and this suggests that there is the need to increase enrolment rates among the adult population who are aged 25 and above. What more, the educational systems in Ghana similar to what pertains in many other African countries have evolved through several reforms to provide improved access to adults who require HEI qualifications for the world of work and society. While adult learners continue to seek higher education, it has become imperative to investigate the drivers for their increased participation and also identify the changing trends in globalisation that also affect enrolment. This study thus examines the determinants of higher education participation among adult learners in a formal lifelong learning mode that serve as motivators for adult learners to enrol in higher education in Ghana.

2. The structure of education in Ghana

In order to understand the context of this study, this section provides a brief discussion of the educational system in Ghana. Basic education is the minimum level of education in Ghana and it is the constitutional right of every Ghanaian child to receive education at the basic level. The age at which formal education begins in Ghana is six years and there is presently a 6-3-3-4 structure of education consisting of six-year primary, three-year Junior high school, three-year senior high/technical/vocational and four-year university or three-year polytechnic education. Higher education in Ghana consists of four years of university education or three years of training at the polytechnic, training colleges, or other health and agricultural institutions (Girdwood, 1999).

3. Problem statement

Previous studies on lifelong learning have focused on the peripherals of higher education which emphasised formal learning systems and the development of curricula for adult learners rather than identifying the factors that influence higher education participation among them. The diversification of higher education globally which includes the provision of post-secondary education as a right of individuals irrespective of their socio-economic background, sex, race, age and physical disability continues to receive attention but with minimal success. However, while adult learners in Ghana continue to face challenges in accessing higher education, especially through formal mode, not much research has been done to establish the rationale for increased participation. These challenges are often found in areas such as, rigid prior entry qualification schemes, numerus clauses and non-existing credit transfer policies (Owusu-Agyeman, 2006). The role of industry in promoting participation in higher education among adult learners continue to shape adult learners' interest in deciding on the appropriate programme to choose, the duration of the programme and the type of institution to attend. This study argues that beyond the factors such as individual motivation and socio-political demand factors are the industry demand factors that affect the enrolment of adults in higher education.

The research was however guided by the following research questions:

- What formal lifelong learning philosophies serve to promote participation in higher education among adult learners?
- What factors influence participation among adult learners in Higher Education Institutions?
- How can industry-demand factors serve as the basis for altering the existing model for determining adult learners' participation in higher education?

4. Objectives of the study

This study sought to identify the determinants of participation in higher education in Ghana among adult learners. The model developed by Kaiser and de Weert (1994) served as the theoretical framework for this study. Three factors that account for demand for higher education among adult learners include: demographic factors, individual demand and policy objectives (Kaiser & de Weert, 1994). While demographic factors provide information on sex, age and geographical location, individual demand factors consist of the general motive of learners to enrol in higher education and this includes: investment, consumption and non-economic factors. The third factor-policy objectives define state policies that are usually controlled by socio-cultural, political and economic aspect and these are often regulated by state agencies that are responsible for higher education. This study further argues that identifying the determinants of higher education is essential to widening enrolment rates in HEIs among adult learners and creating alternate pathways for developing the knowledge and skills of adults. Additionally, the author posits that industry-driven considerations are one of the major factors that account for the increasing number of adult learners in higher education institutions in Ghana. More so, the allotment of structures of opportunities available to adults and the drawing up of policies to promote access (Broek & Hake, 2012) which constitutes the remaining determinants identified by this study are all relevant issues in higher education that require urgent consideration.

5. Theoretical review

Lifelong learning describes the need for people to continue their education and training throughout life because they will face multiple careers in changing economies and enjoy longer lives in evolving societies (Hillier, 2002; Jarvis, 2004; Maruatona, 2012). Additionally lifelong learning reifies the rationale for adult learners' to enrol in higher education programmes. Lifelong learners could be categorised as follows: second chance learners, equity groups (ethnic minorities, women and physically challenged), deferrers, recurrent learners, returnees, refreshers and learners in later life (Gboku & Lekoko, 2007; Teichler & Hanft, 2009; West & Hore, 1989). The concept of universal participation includes both formal and informal learning for all purposes such as social, economic and personal considerations (Barros, 2012; Preece, 2006). Similarly, the OECD (Rojvithee, 2005) argues that universal participation is necessary for meeting economic demands of the twenty-first century. The philosophies of lifelong learning therefore provide relevant information that are necessary to draw conclusions on individual, institutional and state considerations in participating in higher education and providing access to adult learners. Three philosophies of lifelong learning (progressivism, critical philosophy and humanism) are discussed in the next paragraph to provide credence to the rationale for adult learners' participation in higher education.

5.1. Philosophies of lifelong learning

The progressivist perspective of lifelong learning identifies the need to consider peculiar factors such as problem-solving techniques, intellectually stimulating activities and the reliance on the experience of learners to develop their knowledge and skills (Apps, 1979; Fordham, 2000; Nafukho, Amutabi, & Otunga, 2005). In espousing the relevance of the progressivist philosophy of lifelong learning to the motivation of adults to obtain higher education qualifications, it is also essential for the individual to pace with the constantly changing global job market and technology (Dahlman, Zeng, & Wang, 2007; Daniel, 1996; Fejes, 2010; Rizvi & Lingard, 2010) which also describes the economic benefits of continuous learning. Similarly, adult learners who enrol in higher education

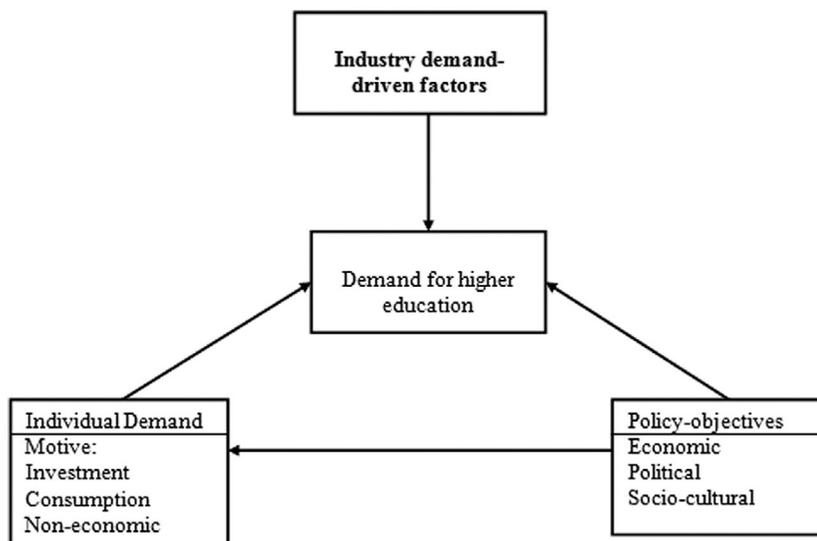
programmes anticipate improved remuneration and additional responsibilities at their work places (Brine, 2006; Brown, Lauder, & Ashton, 2010; Fejes, 2010; Joosten-ten Brinke, Sluijmans, & Jochems, 2009). This study argues that the progressivist philosophy espouses the significance of individual demands as well as industry-driven demands (as shown in Figure 1) to the participation of adult learners in higher education institutions.

The critical philosophy of lifelong learning, on the other hand, suggests that the concept of learning among adults should be seen to promoting knowledge that are essential for the attainment of social, economic and individual liberation (Hillier, 2002; McLean, 2008; Nafukho et al., 2005). Section 5.2.1 provides detailed information on the connection between knowledge needs and skills acquisition among adults that also serve as motivation for obtaining higher education qualification. The critical philosophy identifies the cognitive interests of individuals as consisting of: the technical, hermeneutic and emancipating interest (McLean, 2008), which also determines the rationale for adult learners' participation in higher education. Similarly, the critical philosophy considers lifelong learning as a transformative process (Hillier, 2002) which builds up individuals to learn and promote changes in their social, economic and political lives while seeking the empowerment of individuals in the society. Traditional learning systems in Ghana seek to promote learning within the society which aims at empowering individuals to understand the norms, values and culture which supports the social system. With the introduction of formal education, it has become necessary to integrate the traditional values and objects of learning with the modern educational systems that are driven by economic and social-political demands for knowledge.

From a humanistic perspective, lifelong learning could be described as those set of life activities that takes place at all times and places that are relevant for the promotion of individual freedom, liberation, autonomy, trust and participatory practice (Barros, 2012; Brocket & Hiemstra, 1991; Jarvis, 2011; Kanuka, 2011; Merriam & Brockett, 2007; Nafukho et al., 2005). In conceptualising the concept in the context of this study, lifelong learning could be described as a continuous process going on from birth to the end of our life beginning with learning from basic level of education to the university (Delors, 1996; Rojvithee, 2005) that also impacts on workplace activities. The traditional African systems had in place mechanisms for ensuring that individuals learnt the norms, values and culture of the society through harmony, trust, peace and individual freedom akin to what pertained in most Western countries. This age-long practice is seen in most Ghanaian communities where individuals irrespective of their age, sex, social background or geographical location will strive to obtain knowledge. Therefore, the humanist perspective of lifelong learning provides the innate drive of individuals to develop themselves irrespective of the constraints which may arise in their pursuit of higher education qualification.

Figure 1. Determinant of higher education participation.

Source: Kaiser and de Weert (1994), comparative policy studies in higher education.



5.2. Determinants of adult learners' participation in higher education

This section discusses the factors that determine demand for higher education participation among adult learners in HEIs and provides additional information on education financing.

5.2.1. Individual demand and knowledge acquisition

Individual demand for higher education could be considered as priority for adult learners, HEIs, employers and government. Furthermore, individual demand for higher education in the context of adult learning are mostly driven by factors such as social background, individual aspiration and interest, economic and non economic considerations, and the influence of relations and peers. Kaiser and de Weert (1994) posit that economic motives consist of consumption and investment factors. Thus, consumption factors do not only identify education as an ordinary "good" that can be purchased (Clayson & Haley, 2005; Olssen & Peters, 2005) but more importantly as an outcome of demand by students, employers and society (Cedefop, 2009).

The standard consumption of education suggests that, demand is a function of the price of the good, which in the case of higher education is determined by the direct costs (tuition and facility user fees). The investment motives on the other hand are explained by the human capital approach in economics of education which considers education as an investment of current time and money for future pay ... thus, the general argument is that a relationship exists between the economic rates of return, the time and financial efforts students are prepared to commit and the relationship varies with the state of the economy. (Owusu-Agyeman, 2006, p. 17)

This study argues that knowledge acquisition is an essential factor that influences adult learners' consideration for obtaining higher education credentials. The implications of developing knowledge schemes in lifelong learning especially for adults is that it provides a detailed set of learning deliverables which the learner is able to identify after a period of learning (Joosten-ten Brinke et al., 2009). The knowledge scheme also serves to provide learners with constructs that are relevant for developing relevant skills and attitude needed for the job setting and community development (De Groof, Neave, & Svec, 1998; Fejes, 2010; Kanuka, 2011; Kasworm, 2008) and these are relevant in the attainment of individual goals.

The knowledge acquired by individuals could be classified as context-dependent and context-independent knowledge (Gamble, 2006) and these influence the rationale of adults to enrol in higher education. Bernstein (1999) argues that the mode of knowledge acquisition could be either a vertical or horizontal discourse. Additionally, the author agrees with the views of Bernstein (1999) that, while a vertical discourse takes the form of a rational, unequivocal and systematically principled structure that is hierarchically organised, a horizontal discourse is segmentally organised. Vertical discourse emanated from formal institutions and it is seen as a very powerful tool that could challenge the social distribution of power because of its ability to transform the use of knowledge. Therefore, the goal of adult learners is to seek advanced knowledge that equips them to respond to both social and job demands which are also provided by higher education institutions. Often, vertical discourses are linked to a physical base which also has the tendency to create a distinction from horizontal discourse which Bernstein refers to as potential discursive gap (Wheelahon, 2007). The quest by adult learners to obtain relevant knowledge in a chosen discipline provides the basis to assess the form of knowledge they acquire when they enrol in higher education programmes.

Horizontal discourse originates from the everyday life and it is segmentally organised which means that different forms or modes of knowledge acquisition exist within a national setting. Because a horizontal discourse is segmentally organised, knowledge acquisitions are expected to be segmental and context specific; hence, pedagogic relations among individuals at the same level from different environments may vary from cultural segment to another (Bernstein, 1999). While the knowledge and skills of adult learners are continually shaped by higher education providers, it is not possible for adult learners to identify the specific knowledge and skills needs of industry, especially in the wake of continuous changes in the socio-economic conditions of countries.

5.2.2. *Industry-driven demands*

The demand by industries for highly skilled personnel influences the decisions of adult learners to enrol in higher education. These advanced knowledge and skills demands of business organisations are often connected to the outputs of higher education (Knight & Yorke, 2003). While industries determine the number of higher education graduates they employ in their establishment, the role of higher education institutions is to produce quality graduates who can cope with the work demands of the jobs available. Therefore, industry has become a major determinant of participation in higher education among adult learners primarily because they provide information on skills and knowledge needs which higher education institutions strive to meet. Collaborations between higher education institutions and industries have been described as very important in the development of the knowledge and skills of learners (Bruneel, D'Este, & Salter, 2010; Lee, 1996; Siegel, Waldman, Atwater, & Link, 2003). When adult learners understand the skills and knowledge demands of industry, they are able to decide on appropriate programmes to select and direct their goals at obtaining certificate that qualify them to obtain employment in the industry. Similarly, employees who find themselves in businesses are able to enrol in programmes that serve to provide them with improved remuneration and conditions of service when they complete their programmes of study.

5.2.3. *Policy objectives*

Policy objectives often describe both state and institutional arrangements that affect the enrolment of students in higher education (Clayson & Haley, 2005; Knight, 2006; Olssen & Peters, 2005). Policy objectives at the national level could be considered under two main domains; first is that higher education has positive external effects that are relevant to the economic survival of a country and secondly, that it provides opportunity for individuals in a country to obtain higher education (Kaiser & de Weert, 1994). Maassen and Van Vught (1994) argue that state interventions could include policy instruments such as: *numerus clausus* and selection; structural reforms and state directives to higher education institutions. These instruments either limit or increase the enrolment of students in higher education which also determines adult learners' participation in higher education.

5.2.4. *Higher education financing*

The role of the state in the provision of higher education to all learners has been espoused by several authors (Altbach, Reisberg, & Rumbley, 2009; Barr & Crawford, 2005; Johnstone & Marcucci, 2010) who identified the need for improved funding for learners. However, the financial challenges that adult learners face when pursuing higher education programmes arise due to: high cost of tuition and academic facility user fees that emerge from state austerity measures; removal or reduction of students' scholarship and grants; economic downturn that affects family income and reduced budget for the higher education sector (Altbach et al., 2009); and weak HEI-industry collaboration which prevents HEIs from seeking additional sources of funding.

6. Methodology

This study draws from an interpretivist paradigm that suggests that individuals make meaning of events and phenomenon based on their understanding and view of the society. The interpretivist paradigm also suggests that individuals develop subjective meanings to their everyday experiences which often focus on objects, activities and their environment. Creswell (2003) suggests that the meaning is often varied and several which requires the investigator to look for the complex views of different actors to understudy rather than the narrow views of a few.

Because of the complexity of the issue of institutional and government access-policies and students selectivity, multiple methods of data generation were used. Interviewing was the qualitative method used in the research while questionnaires served as the quantitative instrument used in gathering data from respondents. However, the structure of the questionnaire contained open-ended questions that allowed adult learners to provide additional information regarding the factors that influenced their participation in higher education. Mixed methods are particularly useful for examining communicative events from different perspectives (Lindlof, 1995; Patton, 2002; Teddlie & Tashakkori, 2009). Again, the use of multiple methods of data collection served as triangulation

which is relevant for checking the reliability and validity of the data sets used in the study (Marshall & Rossman, 1989). This was however achieved in this study through avoidance of biases in the development of the data collection instruments, administration of data collection instruments and the application of pilot studies prior to conducting the empirical study. In line with the rules of ethical considerations in conducting research, institutional and individual consent was obtained from the educational institution, government agencies and adult learners used in this study.

The purpose of interviewing the selected respondents was to find out their opinion about the factors that influence participation of adult learners in HEIs, the role of industry-demand factors in widening participation among adult learners and the impact of HEI-Industry collaboration in widening access to HEIs. However, the purpose of the survey was to identify the characteristics of the population in the study and identify the factors that contributed to their participation in higher education while also establishing the link between access, industry-demand factors and the other factors discussed in Section 4.

6.1. Population and sample

The key respondents for the study were staff of the registry of two higher education institutions in Ghana (one state-owned university and one private university), adult learners in the two institutions and a representative of the National Accreditation Board (NAB). The assessable population was defined as learners who gained admission into the universities after attaining the age of 25 for adult learners and staff of the Registry in the two universities. One hundred and twenty adult learners were targeted because they formed almost 8% of the total number of learners in both universities and were considered as individuals who could provide information on the factors that influence participation in higher education among adults. Two registry staff were interviewed to provide information on institutional structures that either supported or discouraged participation among adult learners and also their views on what they considered as determinants of participation among adult learners. The rationale for selecting a representative of the National Accreditation Board was to obtain first-hand information on state policy decisions that affects participation among adult learners in HEIs.

Probability sampling method, specifically simple random sampling method was used to obtain information from adult learners in the universities used in the study, while purposive sampling was used to obtain information from top management staff in the two universities and an official from the NAB. Due to time limitation, one month was used in administering the questionnaire while adult students who attended lectures in the evening or during weekends were contacted. However, some freshly admitted adult students from the institutions were also contacted to complete the questionnaire.

7. Analysis and discussion

This section discusses the responses and views of respondents and interviewees on: the demand for higher education in Ghana, the collaboration between industries and institutions of higher learning and education financing which all support formal lifelong learning. The demand for higher education among adult learners could be seen as relevant for the development of policies necessary for increasing enrolment rates in higher education. The interview with the representative of the NAB revealed that the Board had developed and approved flexible policies that allowed HEIs to develop their own admission policies based on the broad directives of the NAB. Respondents were required to provide their responses on a five-point Likert scale, where 5 represented “strongly agree” and 1 represented “strongly disagree”. The responses of adult learners were computed using mean values where 5 showed strong agreement with the statement provided and 1 showed respondents’ strong disagreement with the statement provided by the author. The standard deviation also showed how respondents’ views were either dispersed or centred around the mean value. Additionally, the questionnaire for adult learners was grouped into five main domains: Demographic information on respondents; individual motivation for pursuing higher education; socio-political demand factors; improving access and organisation and HEI collaboration and education financing.

Table 1. Demographic and other factors that influence participation

Age	Gender	Number of times students applied for admission	Entry qualifications	Work experience	Funding
26 Years (76%)	Male-50	Once-54	HND-87	1-10 Years (90%)	SLWP-3
36 Years (20%)	Female-49	Twice-36	MEE-12	11-20 Years (9%)	FS-21
46 Years (3%)		Thrice-7			SF-75

Notes: HND: Higher National Diploma; MEE: Mature Entrance Examination; SLWP: Study Leave With Pay; FS: Family Support; SF: Self Financing.

7.1. Demographic and other factors

Demographic factors that influence participation among adult learners include: age, gender and geographical location. The first section of the questionnaire sought to gather information on the age, gender, entry qualifications, source of funding, work experience and entry qualifications of respondents.

Table 1 shows the age distribution of adult learners with the highest average age recorded as 26 years (76.8%) followed by 36 years (20.2%) and 46 years (3%). What the age distribution means is that students who were aged between 25 and 35 years constituted a greater percentage of adult learners who were enrolled in the two universities. Additionally, the entry qualifications (Higher National Diploma and Mature Entrance Examination) showed that most of the adult learners were graduates from the polytechnics who applied for advanced qualifications in their field of study. While 87 respondents (87.9%) indicated that their pre-entry qualification was HND, 12 respondents (12.1%) indicated that they were admitted into the universities as matured students. Regarding the number of years respondents had worked in industry, 90 (90.9%) indicated that they had worked in industry between 1 and 10 years, while 9 respondents (9.1%) indicated that they had worked in industry between 11 and 20 years. What this means is that majority of adult learners in the study are early career individuals who require higher education qualifications for their work and themselves. Again, Table 1 shows the number of times adult learners had applied for admission into the two universities. While 54 respondents (54.5%) indicated that they applied for admission only once, 36 respondents (36.4%) noted that they applied twice before obtaining admission into the universities. Seven respondents (7.1%) indicated that they applied to the universities three times before gaining admission. What this means is that adult learners continue to face challenges in gaining admission into HEIs in Ghana although state and institutional admission criteria have been modified to increase enrolments among adult learners. Detailed analysis of the funding sources and have been provided in Section 7.6 of this study.

7.2. Individual demand and motivation for pursuing higher education

This section sought to provide information regarding adult learners' demand and motivation for pursuing higher education programmes. The section also analyses the responses of adult learners regarding industry-demand factors which this study considers as very important in determining the rationale for adult learners' participation in higher education. The importance of individual demand and motivation has been espoused by Kaiser and de Weert (1994) to include: investment, consumption and non-economic consideration as explained in Section 5.2.1 of this study. The views of respondents are presented in Table 2.

Table 2 shows respondents' views on individual demand (investment, consumption and non-economic) factors, industry-driven factors, as well as their motivation for pursuing higher education qualifications. The responses from the adult learners showed that the development of adult learners'

Table 2. Individual demand and motivation for pursuing higher education

Individual demand and motivation for pursuing higher education	Mean	Std. Dev.
Obtaining higher education qualification would help me build my chosen career	4.18	1.20
I would be able to get a better paid job when I obtain higher education certificate	3.98	1.28
Higher education qualification to me is not a form of economic investment	1.97	1.12
Obtaining higher education qualifications would not necessarily lead to increased productivity in my organisation	1.81	1.09
Higher education qualification would help me earn a good salary and live a good life	3.45	1.21
The demand on the job market for the requisite skills in my area of specialisation is my motivation for pursuing higher education	4.33	1.01

Notes: $N = 99$.

Std. Dev. = Standard Deviation.

career was essential for their quest for higher education ($M = 4.18$, $SD = 1.20$). What the mean distribution suggest is that career development was a necessary consideration for most adult learners who enrol in higher education programmes although some respondents suggested that career option had little or no influence on their decision to obtain higher education qualifications. Individual demand and motivation for higher education was also considered as necessary for either promotion or salary increment as shown in Table 2 by the response of the adult learners ($M = 3.98$, $SD = 1.28$). Although some respondents did not consider service condition as a necessary factor in pursuing higher education, the result as shown in Table 2 however suggests that adult learners consider improved remuneration as essential motivation for their participation in higher education. Paradoxically, the study also revealed that adult learners did not consider higher education as a form of economic investment ($M = 1.97$, $SD = 1.12$). What this means is that adult learners do not consider higher education qualification as an investment that could yield immediate returns for them and their families.

Industry-driven demand factors were highly considered by respondents as motivation for enrolling in higher education programmes ($M = 4.33$, $SD = 1.01$). The respondents opined that industry-driven demand factors played a major role in their decision to obtain higher education qualification. Similarly, majority of adult learners disagreed with the statement that obtaining higher education qualification will not necessarily lead to increased productivity in their organisations ($M = 1.81$, $SD = 1.09$). The mean however shows the relationship between industry-driven demand factors and productivity that are essential in the world of work. Additionally, the respondents noted that it would be less rewarding to study a programme in a higher education institution if there were already existing jobs available with better salary conditions ($M = 3.45$, $SD = 1.21$).

7.3. Socio-political demand for higher education

Following the progressivist perspective of lifelong learning which considers the total development of adult learners as relevant to their self advancement (Apps, 1979; Fordham, 2000; Nafukho et al., 2005), social and political considerations also remain important factors that adults consider when enrolling in HEIs. This section sought to analyse the perception of adult learners regarding the link between higher education participation and socio-political factors as shown in Table 3.

Table 3. Socio-political demand for higher education

Socio-political demand for higher education	Mean	Std. Dev.
The programmes offered at the Higher Education Institutions (HEIs) can help me meet my career aspirations	4.30	1.00
Higher education qualification is less rewarding when there are ready jobs available upon completion of school	2.18	1.15
Higher education would help enhance my social status upon completion	3.73	1.29
I would have preferred to enrol in higher education institutions as a part-time student if I had the opportunity. (For regular session students only)	3.15	1.02
I consider my social status is an important aspect of enrolling in an HEI	3.73	1.14
I consider myself as likely to assume additional responsibilities at my workplace and society upon completion of my programme	3.94	1.02

Notes: $N = 99$.

Std. Dev. = Standard Deviation.

7.4. Socio-political demand for higher education

Socio-political demands for higher education could be seen as an interplay between individual demands and career aspirations ($M = 4.30$, $SD = 1.00$). Additionally, the respondents showed that even when there are readily jobs available for them, they would still consider obtaining higher education qualifications ($M = 4.30$, $SD = 1.00$). However, not all respondents were of the opinion that higher could enhance their social status ($M = 3.73$, $SD = 1.29$) although majority of respondents were of the opinion that social status was a necessary factor in determining participation in higher education. When the question was repeated a shown on item five in Table 3 the same mean was obtained ($M = 3.73$, $SD = 1.14$) albeit, with a different standard deviation. Conclusively, the respondents indicated that they were likely to assume additional responsibilities at their workplace and society on completion of their programmes.

7.5. Industry and higher education institution collaboration

The collaboration between industry and higher education institutions could be identified as necessary for the development of core competencies of adult learners. In most situations, adult learners are expected to receive skills matrix from their employers which serve as grounds for providing the necessary training of adult learners. This section sought to analyse the views of respondents on the influence of industry-driven demands on their decision obtain higher education qualifications and how industry could collaborate with HEIs to develop relevant programmes for students. Additionally, the section sought to collate the views of respondents on the need for improved access for adults (Table 4).

The responses from the respondents ($M = 4.73$, $SD = 0.63$) revealed that adult learners highly considered flexible learning arrangements as necessary for the attainment of higher education qualifications. Additionally, they considered collaboration between HEIs and industry as very important in the development of flexible learning arrangements for adult learners ($M = 4.55$, $SD = 0.93$). Similarly, the respondents showed that a stronger collaboration between the HEIs and organisations could help them develop their knowledge and skills ($M = 3.76$, $SD = 1.40$) However, the respondents were of the opinion that while they expected HEIs to provide flexible enrolment sessions for adult learners, they also expected HEIs to improve access to higher education by developing bridging or access

Table 4. Improving access and organisation and HEI collaboration

Improving access and organisation and HEI collaboration	Mean	Std. Dev.
Would you suggest that institutions in Ghana begin a flexible programme to cater for the needs of workers? Please rate the importance of your suggestion	4.73	0.67
Higher education Institutions and employers should provide a more flexible mode of learning for adult learners to encourage increased participation in higher education	4.55	0.93
Higher education institutions should run special programmes for adult learners who do not meet the minimum entry criteria to enrol in any of the programmes?	4.15	1.16
How important would you rate the set of HEI programmes run by your institution to the present skills needs of employers?	3.88	0.88
How will you rate the importance of any collaboration between your organisation and your institution to provide you with better training for future assignments?	3.76	1.40

Notes: $N = 99$.

Std. Dev. = Standard Deviation.

courses ($M = 4.15$, $SD = 1.16$). The development of the competencies of adult learners requires that they are provided with the necessary resources needed for their academic growth to meet the needs of industry ($M = 3.88$, $SD = 0.88$).

7.6. Interview with representative of the National Accreditation Board and HEIs

There were different views provided by respondents from the HEIs and those provided by the officials of the NAB regarding the impact of collaboration between industry and HEIs. While the interviewees from the HEIs were of the opinion that any collaboration between industries and HEIs needed to be backed by state policies, the interviewee from the NAB noted that provisions had been made for effective collaboration between industries and HEIs. The interviewees from the HEIs added that although the NAB had developed flexible policies for HEIs to admit adult learners in HEIs there were still challenges in the provisions especially in the area of assessment of prior learning. The interviewees agreed that it was necessary for adult learners to receive support in the form of flexible teaching and learning schedules and appropriate environments necessary for teaching and learning. The role of employers in the provision of education for adult learners is also important because they provide these learners with flexible working schedule as well as financial assistance.

7.7. Interview with management

The interview sessions with two management members of the two HEIs showed that the criteria for admitting adults into the institutions were often defined with reference to the directives of the NAB. The interviewees also stated that the rationale for adult learners' participation in higher education are based on individual considerations and the responsibility of HEIs are defined as providing relevant knowledge and skills to all category of learners. What this means is that HEIs do not investigate the rationale for adult learners' participation in higher education and therefore they are also not able to manage the unique preferences and needs of adult learners which is considered as essential in the knowledge and skills development of learners. Although the interviewees agreed that the curriculum for teaching and learning, especially in the engineering and business fields were designed to meet the needs of industry. The responses of the management members exemplify the importance of industry-driven demands on the curriculum of HEIs which also influence the decisions of adult learners to obtain higher education qualifications.

Table 5. Education financing

Education financing	Mean	Std. Dev.
I should be responsible for funding my education at the higher education level	2.76	1.40
Funding of higher education should be the responsibility of students and not government	2.45	1.47
Since the government would benefit from the services of graduates, students should not be made to pay fees when enrolling in higher education	2.67	1.39
Government should increase its contribution in the funding of higher education in Ghana in both public and private institutions	3.97	1.32
The government should set up scholarship fund to help needy students to get the needed financial support	4.49	1.26

Notes: $N = 99$.

Std. Dev. = Standard Deviation.

7.8. Education financing

One of the major factors that influence participation in higher education is financing. The respondents were asked of their opinion on the various sources of funding and what they thought was necessary to increase enrolment rates in HEIs.

From Table 5, the respondents disagreed with the statement that adult learners should be responsible for paying their tuition fees ($M = 2.76$, $SD = 1.40$) although a sizeable number of them ($M = 2.45$, $SD = 1.47$) were of the opinion that government should not be responsible for paying their tuition fees. What the mean scores as shown in Table 5 suggest is that while the respondents agreed that government cannot be solely responsible for paying their fees, they also did not expect HEIs to put the burden of full fee tuition payment on them. Majority of the respondents indicated that government should increase its contribution in funding higher education in Ghana ($M = 3.79$, $SD = 1.26$) while they also strongly agreed with the statement that government should set up scholarship funds to help needy students. The views of the respondents show that it is important for adult learners who do not have the means to fund their education to be provided with financial support while alternate funding are also created to increase enrolment rates among adult population.

7.9. The adapted model that integrates industry-demand factors

While the original model developed by Kaiser and de Weert (1994) consisted of demographic factors, individual demands and policy objectives, this study identifies industry-driven factors (rather than demographic factors) as a key consideration in determining adult learners' participation in higher education.

Figure 1 shows the adapted framework that provides the factors that influence demand for higher education among adult learners in Ghana. The adapted framework was informed by the empirical data obtained from respondents on the factors that influence demand for higher education, namely institutional and state policy objectives (economic, political and socio-cultural), individual demands (investment, consumption and non-economic) and industry-driven factors. The demand for higher education has been seen as very important in determining reasons for adult learners' participation in higher education.

8. Implications of the study

The implications of this study are discussed in three main domains: implications for improved access for adult learners in HEIs, implications for institutional reforms and the implications for further research.

This study showed that the factors that influence adult learners' participation include: individual demand, institutional and state policy objectives and industry-demand factors. Therefore, while demographic factors could contribute to participation of adult learners in other national contexts, this study showed that it had very minimal role to play in the decision of adult learners to enrol in higher education programmes. The author argues that although demographic factors played very little role in adult learners' decision to obtain higher education qualifications, the age distribution showed that many adult learners in HEIs in Ghana fall within early career adult group. What this means is that individual demand for higher education which is the effect of economic, socio-political and industry-demand factors continue to influence more young adults to obtain higher education qualifications. Therefore, while young adults continue to search for higher education qualifications, institutional and state reforms could be developed to improve access to higher education. Additionally, the views of the respondents also showed that higher education qualifications would impact positively on the economy through the provisions of education to all citizenry, especially adult learners who are willing to pursue higher education to support the development of their organisations. This was shown by the responses provided by adult learners on the demand for higher education and the influence of the continuous demand.

Secondly, from the regulatory bodies, there is growing emphasis for individuals to take responsibility of their own learning and lifelong learning is often defined by the personal characteristics that lead to such involvement. Although education and training may have economic benefits for individuals (Brine, 2006; Brown et al., 2010), the study showed that economic incentives alone are not enough to motivate adults to pursue further education. Industry-driven demands such as availability of jobs, high paid jobs and employers' expectation of employees' knowledge and skills depth determine the rationale for adult learners' participation in higher education. Self-funded learning involves the responsibility of individuals to finance their own continuing education and training with minimum or no support from government (UNESCO, 2005). This is so because valuing learning is a key element in the creation of a culture of learning for realising lifelong learning. Additionally, there should be increased cooperation between regulatory agencies, HEIs and Industry which creates the condition for transparency and mutual trust (Bruneel et al., 2010) that are necessary for effective teaching and learning.

While the study did not focus on alternate access routes for adults, the author argues that, in order to meet the growing needs of adult learners in HEIs while satisfying the knowledge and skills needs of industry, there is the need to diversify education delivery. Although new providers are emerging in the form of virtual universities, franchise universities, distance learning centres among others their programmes are often geared towards the training of secondary school leavers. What these institutions need to do is to offer courses in professional or vocational subjects in a more practical way to meet the needs of employers and industry. Similarly, higher education institutions can also provide custom education and training services on contract to industry which are often more efficient and useful than regular training, and at lower cost (Owusu-Agyeman, 2011). The following could be described as the key considerations for widening participation and improving knowledge and skills development among adult learners:

- (1) Building effective working partnership among regulatory agencies, higher education institutions and industries to promote interest in higher education among the working population.
- (2) Providing insight into the demand for learning by adult learners in knowledge-based society which will entail redefining basic skills and such analysis should include future labour trends and market expansion.

- (3) Gathering adequate resources from both public and private entities and the encouragement of new forms of investment in higher education because investment in human capital is very important in the growth of every economy.
- (4) Providing improved access to learning opportunities to adults by making them more visible and introducing new provisions through informal and non-formal modes of learning and removing all barriers to access.
- (5) Creating a learning culture by rewarding adults who enrol in higher education programmes and encouraging adult learners to strive for excellence.

Beyond the above considerations, HEIs should gather data on the motivation for adult learners' participation in higher education and assist them to develop a learning plan for their development.

9. Conclusions

In Ghana, although the formal mode of lifelong learning has not been developed to suit the local content, some government policy documents have provided evidence which shows that if given the needed attention and support many adult learners could receive education without barriers. Qualifications are an essential element of a framework of lifelong learning; they are a currency that bestows a public value and recognition of learning, and they can act as a gateway to additional learning (Joosten-ten Brinke et al., 2009; Shalem & Steinberg, 2006). A national qualification system that integrates all forms of learning is relevant to the development of the competencies of individuals and adults in Ghana. This is because it combines all qualifications available in institutions in the country and provides mechanisms which support the provision of qualifications. Challenges for adult learners who seek higher enrolment face would be reduced through the following: less restrictive access policies (Castle & Attwood, 2001; Sandberg & Andersson, 2011); less rigid numerous clause (for adult learners); introduction of market models (Chapman & Aspin, 2013; Owusu-Agyeman, 2011; Rizvi & Lingard, 2010) in the provision of higher education; the development of a national qualification framework that takes into account the needs of adult learners and the development of an effective credit transfer schemes. The role of industry in addressing skilled labour shortfalls and could be seen through effective collaboration between, government, higher education institutions and industry as shown by Kasworm (2014). Similarly, industries could provide HEIs with specific resources and tools that could support the development of the knowledge and skills of adult learners. The aforementioned factors could be further investigated to provide the countries with scientific evidence of the veracity of such intervention, especially their effect on widening participation among adult learners.

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Author details

Yaw Owusu-Agyeman¹

E-mail: yowusu-agyeman@gtuc.edu.gh

ORCID ID: <http://orcid.org/0000-0001-6730-5456>

¹ Registry Department, Ghana Technology University College, PMB 100 Accra North, Accra, Ghana.

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References

- Altbach, P. G., Reisberg, L., & Rumbley, L. E. (2009). *Trends in global higher education: Tracking an academic revolution*. Place de Fontenoy: United Nations Educational, Scientific and Cultural Organization.
- Apps, J. W. (1979). *Problems in continuing education*. New York, NY: McGraw-Hill.

- Avoseh, M. B. M. (2000). Adult education and participatory research in Africa: In defence of tradition. *Canadian Journal of Development Studies*, 21, 565–575.
<http://dx.doi.org/10.1080/02255189.2000.9669931>
- Barr, N. A., & Crawford, I. (2005). *Financing higher education*. London: Routledge.
<http://dx.doi.org/10.4324/9780203321515>
- Barros, R. (2012). From lifelong education to lifelong learning: Discussion of some effects of today's neoliberal policies. *European Journal for Research on the Education and Learning of Adults*, 3, 119–134.
<http://dx.doi.org/10.3384/rela.2000-7426>
- Bernstein, B. (1999). Vertical and horizontal discourse: An essay. *British Journal of Sociology of Education*, 20, 157–173.
<http://dx.doi.org/10.1080/0142569995380>
- Brine, J. (2006). Lifelong learning and the knowledge economy: Those that know and those that do not—The discourse of the European Union. *British Educational Research Journal*, 32, 649–665.
<http://dx.doi.org/10.1080/01411920600895676>
- Brocket, R. G., & Hiemstra, R. (1991). *Self-direction in adult learning. Perspectives on theory, research and practice*. London: Routledge.

- Broek, S., & Hake, B. J. (2012). Increasing participation of adults in higher education: Factors for successful policies. *International Journal of Lifelong Education*, 31, 397–417.
- Brown, P., Lauder, H., & Ashton, D. (2010). *The global auction*. New York, NY: Oxford University Press.
<http://dx.doi.org/10.1093/acprof:oso/9780199731688.001.0001>
- Bruneel, J., & D'Este, P., & Salter, A. (2010). Investigating the factors that diminish the barriers to university–industry collaboration. *Research Policy*, 39, 858–868.
<http://dx.doi.org/10.1016/j.respol.2010.03.006>
- Castle, J., & Attwood, G. (2001). Recognition of prior learning (RPL) for access or credit? Problematic issues in a university adult education department in South Africa. *Studies in the Education of Adults*, 33, 60–71.
- Cedefop. (2009). *The shift to learning outcomes. Policies and practices in Europe* (Cedefop Reference Series; 72). Luxembourg: Publications Office. Retrieved June 14, 2014, from http://www.cedefop.europa.eu/etv/Upload/Information_resources/Bookshop/525/3054_en.pdf
- Chapman, J. D., & Aspin, D. N. (2013). A problem-solving approach to addressing current global challenges in education. *British Journal of Educational Studies*, 61, 49–62.
<http://dx.doi.org/10.1080/00071005.2012.756166>
- Clayson, D. E., & Haley, D. A. (2005). Marketing models in education: Students as customers, products, or partners. *Marketing Education Review*, 15, 1–10.
<http://dx.doi.org/10.1080/10528008.2005.11488884>
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative and mixed method approaches*. Thousand Oaks, CA: Sage.
- Dahlman, C., Zeng, D. Z., & Wang, S. (2007). *Enhancing China's competitiveness through lifelong learning*. Washington, DC: The World Bank
- Daniel, J. S. (1996). *Mega-universities and knowledge media: Technology strategies for higher education*. London: Kogan Page.
- De Groof, J., Neave, R. J., & Svec, J. (1998). *Democracy and governance in higher education*. Kluwer Law International.
- Delors, J. (1996). *Learning: The treasure within report to UNESCO of the International Commission on Education for the twenty-first Century*. UNESCO.
- Fejes, A. (2010). Discourses on employability: Constituting the responsible citizen. *Studies in Continuing Education*, 32, 89–102.
<http://dx.doi.org/10.1080/0158037X.2010.488353>
- Fordham, P. (2000). Redefining adult and continuing education in Africa. In S. A. Indabawa, A. Oduaran, T. Afrik, & S. Walters (Eds.), *The state of adult and continuing education in Africa* (pp. 197–205). Windhoek: John Meinert Printing.
- Foster, P. (1971). *Education and social change in Ghana*. London: Routledge and Kegan Paul.
- Gamble, J. (2006). Theory and practice in the vocational curriculum. In M. Young & J. Gamble (Ed.), *Knowledge, curriculum and qualifications for South African further education* (pp. 87–103). Pretoria: Human Sciences Research Council Press.
- Gboku, M., & Lekoko, R. N. (2007). *African perspectives on adult learning: Developing programmes for adult learners in Africa*. Hamburg: UNESCO Institute for Life Long Learning.
- Girdwood, A. (1999). Tertiary education policy in Ghana—An assessment : 1988–1998. Washington, DC: World Bank. Retrieved August 23, 2012 from <http://documents.worldbank.org/curated/en/1999/05/437232/tertiary-education-policy-ghana-assessment-1988-1998>
- Graham, C. K. (1971). *The history of education in Ghana: From earliest times to the declaration of independence*. London: Frank Cass.
- Hillier, Y. (2002). *Reflective teaching in further and adult education*. London: Continuum.
- Jarvis, P. (2004). *Adult education and lifelong learning: Theory and practice*. London: Routledge.
- Jarvis, P. (2011). Adult education and the changing international scene: Theoretical perspectives. *PAACE Journal of Lifelong Learning*, 20, 37–50.
- Johnstone, D. B., & Marcucci, P. N. (2010). *Financing higher education worldwide: Who pays? Who should pay?* Baltimore, MD: John Hopkins University Press.
- Joosten–ten Brinke, D., Sluijms, D. M. A., & Jochems, W. M. G. (2009). Quality of assessment of prior learning (APL) in university programmes: Perceptions of candidates, tutors and assessors. *Studies in Continuing Education*, 31, 61–67.
<http://dx.doi.org/10.1080/01580370902741894>
- Kaiser, F., & de Weert, E. (1994). Access policies and mass higher education: A comparative analysis of the use of policy–instruments in seven countries. In L. Goedegebuure & V. V. Frans (Eds.), *Comparative policy studies in higher education*. Utrecht: LEMMA.
- Kanuka, H. (2011). Understanding e-learning technologies through philosophies-in-practice. In T. Anderson (Ed.), *Theory and practice of online learning*. (pp. 91–118). Edmonton: AU Press.
- Kasworm, C. E. (2008). Emotional challenges of adult learners in higher education. *New Directions for Adult and Continuing Education*, 120, 27–34.
<http://dx.doi.org/10.1002/ace.v2008.120>
- Kasworm, C. E. (2014). Paradoxical understandings regarding adult undergraduate persistence. *The Journal of Continuing Higher Education*, 62, 67–77.
<http://dx.doi.org/10.1080/07377363.2014.916587>
- Knight, J. (2006). *Higher education crossing borders: A guide to the implications of the general agreement on trade in services (GATS) for cross-border education*. Vancouver: Commonwealth of Learning.
- Knight, P. T., & Yorke, M. (2003). Employability and good learning in higher education. *Teaching in Higher Education*, 8, 3–16. <http://dx.doi.org/10.1080/1356251032000052294>
- Lee, Y. S. (1996). “Technology transfer” and the research university: A search for the boundaries of university–industry collaboration. *Research Policy*, 25, 843–863.
[http://dx.doi.org/10.1016/0048-7333\(95\)00857-8](http://dx.doi.org/10.1016/0048-7333(95)00857-8)
- Lindlof, T. R. (1995). *Qualitative communication research methods*. Thousand Oaks: Sage.
- Maassen, P., & Van Vught, F. (1994). Alternative models of governmental steering in higher education. In L. Goedegebuure & V. V. Frans (Eds.), *Comparative policy studies in higher education*. Utrecht: LEMMA.
- Marshall, C., & Rossman, G. B. (1989). *Designing qualitative research*. CA: Sage.
- Maruatona, T. L. (2012). Delivering lifelong learning for sustainable development in Southern Africa: Problems and prospects. *International Journal of Lifelong Education*, 31, 377–395.
<http://dx.doi.org/10.1080/02601370.2012.663800>
- McLean, M. (2008). *Pedagogy and the University's critical theory and practice*. London: Continuum International.
- Merriam, S. B., & Brockett, R. G. (2007). *The profession and practice of adult education: An introduction*. San Francisco, CA: Jossey-Bass.
- Nafukho, F., Amutabi, M., & Otunga, R. (2005). *African perspectives on adult learning: Foundations of adult education in Africa*. Cape Town: Pearson.
- Nwauwa, A. O. (1997). *Imperialism, academe and nationalism: Britain and university education for Africans, 1860–1960*. London: Frank Cass.
- Olssen, M., & Peters, M. A. (2005). Neoliberalism, higher education and the knowledge economy: From the free market to knowledge capitalism. *Journal of Education Policy*, 20, 313–345.
<http://dx.doi.org/10.1080/02680930500108718>
- Omolewa, M. (2002). *The practice of lifelong learning in Indigenous Africa*. Hamburg: UNESCO Institute for Education.

- Owusu-Agyeman, Y. (2006). *Government access policies on polytechnic education in Ghana: The relevance for Cape Coast polytechnic* (A thesis dissertation submitted to the University of Twente for the award of Masters in EST). Retrieved January 1, 2015, from <http://essay.utwente.nl/590/>
- Owusu-Agyeman, Y. (2011, November 14–16). Increasing access to polytechnic education among working population in Ghana: A market model perspective. In *International Conference of Education, Research and Innovation (International Association of Technology, Education and Development)* (pp. 998–1007). Madrid. Retrieved from <http://library.iated.org/view/OWUSUAGYEMAN2011INC>
- Patton, M. Q. (2002). *Qualitative research and evaluation methods*. Thousand Oaks, CA: Sage.
- Preece, J. (2006). Beyond the learning society: The learning world? *International Journal of Lifelong Education*, 25, 307–320.
<http://dx.doi.org/10.1080/02601370600697227>
- Rizvi, F., & Lingard, R. (2010). *Globalizing education policy*. London: Routledge.
- Rojvithae, A. (2005). *Introduction definition of lifelong learning, Global Forum on education: The challenges for education in global economies*. OECD. Retrieved June 18, 2014, from www.oecd.org/dataoecd/62/2/35469178
- Sandberg, F., & Andersson, P. (2011). RPL for accreditation in higher education – As a process of mutual understanding or merely lifeworld colonisation? *Assessment and Evaluation in Higher Education*, 36, 767–780.
<http://dx.doi.org/10.1080/02602938.2010.488793>
- Shalem, Y., & Steinberg, C. (2006). Portfolio-based assessment of prior learning: A cat and mouse chase after invisible criteria. In P. Andersson & J. Harris (Eds.), *Re-theorising the recognition of prior learning*. (pp. 97–115). NIACE: Leicester.
- Siegel, D. S., Waldman, D. A., Atwater, L. E., & Link, A. N. (2003). Commercial knowledge transfers from universities to firms: Improving the effectiveness of university–industry collaboration. *The Journal of High Technology Management Research*, 14, 111–133.
[http://dx.doi.org/10.1016/S1047-8310\(03\)00007-5](http://dx.doi.org/10.1016/S1047-8310(03)00007-5)
- Teddle, C., & Tashakkori, A. (2009). *Foundations of mixed methods research: Integrating quantitative and qualitative in the social and behavioural sciences*. Thousand Oaks, CA: Sage.
- Teichler, U., & Hanft, A. (2009). Continuing higher education in a state of flux: An international comparison of the role and organisation of continuing higher education. In M. Knust & A. Hanft (Eds.), *Continuing higher education and lifelong learning*. (pp 1–13). Dordrecht: Springer.
- The World Bank. (2013). *Country at glance*. Retrieved August 20, 2013, from <http://www.worldbank.org/en/country/ghana>
- UNESCO (2005). *Perspectives on Distance Education: Lifelong Learning & Distance Higher Education*. Vancouver, Canada: COL/UNESCO.
- West, L., & Hore, T. (1989). The impact of higher education on adult students in Australia Part 2. The person. *Higher Education Journal*, 18, 473–483.
<http://dx.doi.org/10.1007/BF00140750>
- Wheelahan, L. (2007). How competency-based training locks the working class out of powerful knowledge: A modified Bernsteinian analysis. *British Journal of Sociology of Education*, 28, 637–651.
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