

## **Social Media as Non-Formal Interactive Platforms for Educational Engagement among Undergraduates in Niger Delta University, Nigeria**

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### **Abstract**

*This study investigated social media as non-formal interactive platforms for educational engagement among undergraduates in Niger Delta University, Wilberforce Island, Nigeria. The study lay to rest the contention whether social media is merely gossip oriented interactive platforms or as non-formal interactive influencer of educational engagement and behavioural change among undergraduates in the learning process. Survey research design was adopted for the study. From a population of three thousand final year undergraduate students from twelve faculties, stratify proportionate random sampling technique was used to select fifty percent (50%), that is 1,500 students that participated in the study. A structured questionnaire captioned “Social Media Platforms and Educational Engagement Scale” (SMPEES),  $r=0.86$  was used for data collection. Data collected were analyzed using descriptive and inferential statistics. Results established that more female (58.9%) than male (41.1%) participated in the study. Undergraduates from the social sciences accounted for the highest users of the social media (26%), followed by those in management sciences (20.5%) and education (16.5%). Awareness on social media was slightly above average (51.2%), subscription rate was low (44.5%) but utilization was high (54.7%). A significant association was established between three independent predictors (awareness, subscription and utilisation) and the constant variable. The study concluded that social media serve as non-formal education platforms that facilitated interactive learning and educational engagement among undergraduates. It was recommended that, social media should not only be used to promote knowledge society, but also, assist to prepare people of all ages for the all anticipated network society as the world moves gradually from knowledge economy.*

**Keywords:** Educational engagement, interactive, non-formal, platforms and social media.

### **Premise of the Research**

Across the globe, there are influences that alter the roles of academic, business, communication, interaction and competitiveness. These influences as reported (Boyd and Elison, 2007), are driven by information technologies, characterized by information knowledge (with over 70 percent of workers in developed economies being information workers), and new network media which facilitate collective intelligence by making sure that existing knowledge becomes quickly accepted due to networked data-bases that enhance online interaction among actors in the interactive learning space.

It is therefore envisioned that the next development generation evolution after this present knowledge economy is that of network economy (Buctner, 2016). In this system, it is expected that almost all domesticated knowledge is shared among and across various networks for the benefits of the network members as a whole, and to gain economies of scale in a wider open space. This expected network economy is not only associated with economic activities but also, a gradual evolution of network that creates a well interconnected social order (Kaplan and Haenian, 2011), that would influence the passion of individual globally to engage in network transactions.

Universally, it has been established that one of the reasons why people receive education is for engagement. This, according to Oghenekohwo (2013) is among the four core elements of education namely: empowerment, engagement, experience and evidence. As education is expected to ensure capacity for engagement, interactive engagement has been classified as a powerful liberal idea, which in the context of non-formal education is critical to the empowerment of people for changes in the society (Halliru, 2015). Hence, the emergence of the social media with its multi-facets platforms is seen as added value to basic objectives of non-formal education through the facilitation of learning interaction. In a context, there are social platforms for interaction which enhance processes of learning engagement, education, knowledge sharing and the promotion of cross-cultural knowledge as mediated by online communities on such social platforms. In specific terms, a number of studies (Tufekci & Wilson, 2012; Livingstone & Markham, 2010) have outlined some benefits of social media in bringing about knowledge and awareness to influence public decision through participatory civic engagement. It is also widely perceived that facebook, twitter, instagram and youtube became platforms of expression of concern and responses for millions of people in Nigeria (Halliru,2015).

Social media therefore are considered as platforms for the mobilization of inactive citizens to become more active and to participate fully in all types of civil engagement, social interaction and interactive learning among others. This informs the submission of Munoz and Wrigley (2012) that the interactive nature of the social media allows people to increase their literacy level and enhance their social outlook. Besides, it also sustains participation in civil action (democratic activities), and the building of consensus on network of collective intelligence for a passion driven social system.. Besides, Halliru, (2015) reported that through the social media platforms, people are informally mobilized to exercise their civic responsibilities. They also have opportunity to express their views and opinions through deliberative civic engagement (Nabatchi, 2014) and setting agenda on public discourse for new thinking and activities relating to public policies. Therefore, social media is not only stimulating civic engagement but also, sustaining non-formal interactive learning context where people acquire new knowledge, ideas, orientation and the know-how.

In contemporary social interactive discourse, social media promotes increase knowledge dissemination, building of trust, and active mobilization toward deliberative civic engagement (Nabatchi, 2014), that is mediated by intellectualism in all forms of intellectual, social and civic discourse. So, it was submitted that facebook, twitter, instagram and youtube are the commonly used social media platforms in tertiary education settings that build network of interaction, collective intelligence and social structures which influence social relations that are all fundamental to the present knowledge economy and anticipated network economy. However, how do the social media serve as a non-formal interactive platforms that promote educational engagement among undergraduates in a thought environment like the Niger Delta University, Wilberforce Island, Nigeria?

### ***Statement of the Problem***

Arising from the above, this research is of the stance and concern that there seems to be a disconnect between two schools of thought with respect to the place of the social media platforms with respect to learning engagement. One school states that social media platforms are destroying society's social skills as social media reduce face-to-face interactions that tend to widen social interaction gaps between and among college students who are constantly surrounded by digital media. The second school holds that social media enhance interactive learning, particularly by the sustenance of communities of learners through non-formal educational engagement. Unfortunately, no empirical studies seem to have ventilated either the positive or negative influence of the social media (as non-formal interactive platforms) for interactive learning engagement or social interaction among undergraduates of Niger Delta University, Wilberforce Island, Nigeria. This was the gap filled in this research as an empirical contribution to knowledge on social engagement through non-formal education.

### ***Objectives of the Study***

Specifically, the study:

- (i) ascertains the features of social media as non-formal platforms for interactive learning and educational engagement;
- (ii) establishes how social media platforms facilitate educational engagement; and
- (iii) determines the correlation between social media platforms and interactive learning and educational engagement among undergraduates in Niger Delta University.

### ***Investigating Questions***

To guide this study, the following three research questions were raised.

1. What are the features of social media as non-formal education platforms for interactive learning?
2. In what ways do social media platforms facilitate educational engagement among undergraduates?
3. What correlation subsists between social media platforms as non-formal interactive learning and educational engagement?

### ***Theoretical Perspectives and Literature Review***

This study now examined the theoretical perspectives and literature review on social media, social interaction and social processes. The justification was to articulate the basis upon which the variables were conceptualized and contextualized for hypothetical postulations.

### ***Interaction Theories***

Putting the interaction theories together, it is possible by integrating developmental phenomenological, enactive and dynamic approaches to social interaction. This according to Froese and Gallagher (2012) is plausible on account that, the problem of what has become known as “social cognition” or “theory of mind” in cognitive science concerns how we normally understand each other in our everyday encounter (Frith, 2008). The fields of developmental psychology, phenomenology and enactive theory of social interaction have in their own ways emphasized the essential role of social processes that are not confined to the individual, but that are truly interactive. In other words, Froese et al (2012), wrote that, rather than following the majority consensus in which social interaction is merely a special case of social cognition defined as theory of mind (Goldman, 2006), these alternative approaches argue that, in general, social understanding depends on and is realized by social interaction. In this sense, the enactive theory of social interaction in the submissions of De Jaegher; Di Paolo & Gallagher, (2010);, Froese & Di Paolo, (2011) depicts the process of social interaction as: a mutually engaged and co-regulated interaction between at least two autonomous and cognitive agents where the co-regulation and the interactive behaviours mutually affect each other, such that the interaction process constitutes a self-sustaining organization in the domain of relational dynamics. From the explanation of enactive theory of social interaction, it is evident that, the focus is on the process of immediate real-time interaction with others. Besides, it can also be extended to more mediated interactions. It is important however in the views of Froese & Di Paolo, (2009); Toreance & Froese, (2011); and Gallagher & Hutton, (2009) to note that, an explicit requirement of social interaction is that the autonomy of the cognitive agents involved is not destroyed, and although its scope can be reduced, yet, it can also be increase. According to the enactive theory, the process of social interaction can manifest in various ways, such as co-determination (Thompson, 2001), participatory sense making (De Jaegher & Di Paolo, 2007), effective mutual corporation (Fuchs & De Jaegher, 2009; Froese & Fuchs, 2012). The underlying importance of these perspectives is that, the interaction process itself plays an essential role in constituting social cognition (De Jaegher et al, 2010), which at its best provides the platform for interactive learning engagement, built on mutual interaction for the reason of mutual academic understanding.

Meanwhile, the social exchange theory of social interaction (Turkle, 2011) focuses on the exchanges that take place with one another on a daily basis. Social interaction is driven by exchange that is emotionally based which allows one to act with one another in an ordered way. In a sense, social interaction is contextual which implies a contractedness of experience and activity. In face-to-face interactions, the context of communication is provided by situations. However, in mediated interactions, there are no situations so one has to deal with loss of context.

Consequently, the social exchange theory in its contextual analysis, places emphasis on dislocation of action from place or situation attended with discontinuity in time where such context is lost. The intentions and perhaps. interpretations as reported by Subrahmanyam & Greenfield, (2014)., are inherently mediated and built respectively on emotional satisfaction as this form of communication is still social in nature and as humans; satisfactions are derived from social activities as reported by online social systems and analysts.

### ***Social Media and its Related Features***

Social media have been reported to be platforms for knowledge sharing (Rheingold, 2008), expression of opinion and civic engagement in the affairs of a state (Livingston & Markham, 2010). Social media as inferred by Buetner, (2015).are computer-mediated tools which allow people to create, share or exchange information, career interest, ideas, and pictures/videos in virtual communities and networks.

However, taking virility factor into account, that is, defined as a greater likelihood that users will re-circulate content posted by another user to their social network; the mobile social media refers to the combination of mobile devices that allow the creation and exchange of users' generated contents (Kaplan, 2012).

Due to the fact that mobile social media run on mobile devices, they differ from traditional social media by incorporating new contents such as the current location of the user (location sensitivity or the time delay between sending and receiving messages (contents) otherwise referred to as time sensitivity (Kaplan, 2012). In attempt to provide definite features of the concept, literatures in the field of social media (Boyd & Ellison 2007) gave four commonalities even though some writers refer to social media as social networks without providing the content analysis of the social networks in terms of the operational context (Rheingold, 2008).

The four commonalities that are unique to current social media services are that:

- social media are web 2.0 internet-based applications (Obar & Wildman, 2015; Kaplan & Haenian, 2010);
- user-generated content (UGC) is the lifeblood of the social media organism (Obar et al, 2015; Kaplan et al, 2010);
- Users create service – specific profiles for the site or app that are designed and maintained by the social media (Boyd et al, 2007); and
- social media facilitate the development of online special networks by connecting a user's profile with those of other individuals and/or groups (Obar et al, 2015).

Engaging in social media is now activity imperative for students of tertiary institutions. Although skeptics are being converted because social media outlets are considered responsible for a huge portion of the content and the traffic of the internet. According to Josh Benoff of Forrester Research, three in four adults now use social media tools on the internet to communicate. Younger audiences (such as university undergraduates) are simply living a good portion of their lives online. Students now live their lives in hybrid environment. When describing students usage patterns of the social media, a writer points out that the facebook is their directory. It's the first place they go to find social information. Social media and mobile social media share certain characteristics which endeared it to students within the campus setting. In an article by Kristopher and Bruno (2011), cited in Kietzmann & Jan, (2011) it was established that there is a framework that defines social media by using seven operational networks of webs which are:

**Identity:** Represents the extent to which users reveal their identities in a social media setting. This can include disclosing information such as name, age, gender, profession, location and also information that portrays users in certain ways.

**Conversation:** Represents the extent to which users communicate with other users in a social media setting. Many social media sites are designed primarily to facilitate conversations among individuals and groups for all sorts of reasons.

**Sharing:** Represents the extent to which users exchange, distribute and receive contents. The term "social" implies that exchanges between people are crucial.

**Presence:** Represents the extent to which users can know if other users are accessible. It includes knowing where others are, in the virtual world and/or in the real world, and whether they are available.

**Relationship:** Represents the extent to which users can be related to other users. Two or more users have some forms of associations that lead them to converse, share objects of sociality, meet up or simply just list each other as a friend or fan.

**Reputation:** Represents the extent to which users can identify the standing of others, including themselves, in a social media setting. Reputation can have different meanings on social media platforms. In most cases, reputation is a matter of trust, but because information technologies are not yet good at determining such highly qualitative criteria, ass social media sites rely on "mechanical turks".

**Groups:** Represents the extent to which users can form communities and sub-communities. The more "social" a network becomes, the bigger the group of friends, followers and contacts

Collapsing these seven characteristics, it is plausible to submit that, even though people obtain information, education, news and other data from electronic media, yet social media as affirmed by Kietzmann, et al, (2011) are distinct from such industrial media as they are comparatively in expressive and accessible. Besides, other features of the social media as shared by industrial media are the capability to reach small or large audience. However, some of the distinguishing properties of the social media are in terms of quality, reach, frequency, accessibility, usability, immediacy and performance.

While relying on Freire (1993) argument on teachers-learners engagement in the informal setting, Halliru (2015) reasoned that, the application of social media as a platform for continuous learning has strong implications for non-formal education practice as people are learning new ideas consciously and otherwise.

Thus, it can be said that, the level of learning that take place in this online forum is giving people new dimension to learning and deliberative learning engagement. As a lead, literature asserts that the users of social media cannot be a passive participant in learning and engagement in public affairs, rather, learners, adopt and invent appropriate knowledge of living in the world (Rheingold, 2008). Hence, social media platforms are used in mobilizing inactive participants to become more active and proactive in civic and academic engagement.

According to Lebedko,(2014), universally acknowledged benefit of institutional participation in social media is the reduced barrier to distribution of information. All of the social media tools and websites give universities the opportunity to connect to students on a deeper level. Lebedko, (2014), reflected on mainly positive effects of social media and other internet based social network. Accordingly, Guo-Ming (2012) reported that social media are used to document memories, learn about and explore things, advertise one and form friendship. In another perspective, Lebedko (2014)wrote that, not only do social media change the way people around the world communicate, it also alter the way one understands each other. Besides, social media have allowed for mass cultural exchange and intercultural communication.

### ***Social Media in Learning Interaction and Educational Engagement: Empirical Evidences***

Having social media in the learning environment has been a controversial issue for which stakeholders were worried about negative consequences of social media tools in the teaching-learning context. Nevertheless like other educators, Joordens (2013) argued that assignments given on social media would not only strengthen the site's psychology-related contents, but also provide an opportunity for students to engage in critical reflection about the negotiations involved in collaborative knowledge production.

Analytically, Moody (2010) reported studies with evidence that, facebook represents a potentially useful tool in educational contexts. It allows students to ask more minor questions that they might not otherwise feel motivated to visit a professor in person during office hours to ask. The facebook allows students to collect their thoughts and articulate them in writing before committing to their expression. Also, facebook aid students in self-expression and encouragement of more frequent student-and-instructor and student-and-student communication. Twitter also promotes social connections among students. It can also be used to enhance communication building and critical thinking. According to Ghosh (2011), a noted feature of twitter is re-tweeting. Twitter allows other people to keep up with important events; stay connected with their peers and contributes in various ways throughout social media.

Youtube is reported by Moran, Seaman & Tinti-Kane (2012). as the most frequently used social media tool in the classroom context. Students use youtube to watch videos, answer questions and discuss content. Sherer and Shea (2011) claimed that, youtube increased participation, personalization (customization) and learning content production. Also, youtube improves students' digital skills and provides opportunity for peer learning and problem solving. Eric and King (2012) found that youtube kept students attention, generated interest in the subject and clarified course content. In addition, students reported that the video helped them recall information and visualize real world applications of course concepts.

### ***Hypotheses***

Two hypotheses were postulated for the study.

**H<sub>01</sub>** There is no significant correlation between social media platforms and educational engagement among undergraduates.

**H<sub>02</sub>** Social media platforms do not significantly predict non-formal interactive learning process among undergraduates.

**H<sub>03</sub>** There is no significant correlation between social media platforms and civic engagement among students.

### ***Methodology***

This study adopted the survey research design. Population comprised of three thousand final year undergraduates students from twelve faculties in Niger Delta University during 2015/2016 academic session. Stratify proportionate random sampling technique was used to select 50% (1,500) respondents.

A structured questionnaire titled “Social Media Platforms and Educational Engagement Scale” (SMPEES) was used to collect data for the study. Cronbach alpha coefficient was adopted to establish the overall internal consistency and stability of all measures at 0.86 indicating that all the measures were highly reliable, dependable and stable. Data were analysed using frequency distribution and Spearman Pearson correlation coefficient at 0, 05 alpha.

### **Method of Data Analysis**

The analysis of the data involved frequency and percentage distribution for discrete data, with results presented using contingency tables. The Spearman’s Rank Order Correlation (Rro) was the statistical technique used for hypothesis testing.

### **Results and Discussion**

A total of 1,500 copies of the instruments were administered to the sample frame randomly; retrieval rate recorded a success of 1,200 copies (80%) of the total number of distributed copies. Thereafter copies were sorted for errors, missing values and outliers, thus leaving a total of 1,100 (73.3%).

### **Results of Demographic Data**

**Table 1 shows the demographic distribution of the respondents.**

<b>Variables</b>	<b>Frequency (n=1,100)</b>	<b>Percentage</b>
<b>Sex</b>		
Male	452	41.1
Female	648	58.9
<b>Age (yrs)</b>		
16-20 years	937	85.2
21-25 years	121	11
26-30 years	33	3
31 years & above	09	0.8
<b>Faculties</b>		
Education	181	16.5
Arts	145	13.2
Pharmacy	18	1.6
Basic Medical Science	21	1.9
Engineering	43	3.9
Law	87	7.9
Management Science	226	20.5
Social Sciences	286	26
Nursing	93	8.5

Source: Field Survey, 2017.

The results shown on the contingency table 1 above provide the discrete data on the respondents. There were 648 (58.9%) female respondents while 452 (41.1%) were male. This result shows that greater numbers of female undergraduates were more involved in social media activities for interaction, learning engagement and other forms of interaction than their male students.

In terms of the age of the participants, the result indicates that, the greater numbers of university undergraduates were within ages 16-20 years accounting for (937) 85.2% of the total respondents who participated in the study. This also implies that, those of this age group were more active in the use of the social media platforms for interactive learning, civic engagement, sharing of educational contents, doing assignments and sourcing for learning materials. It also connotes that, adolescents were more active in the use of the social media platforms than any other youth groups for non-formal interaction and learning activities. In terms of the spread of the participants, the results show that most of the students were from the social sciences (26%) followed by students from management sciences (20.5%) and next in that ranking by those from education (16.5%).

The inference from these results is that, students in the humanities were more inclined to the use of the social media platforms than those from the other academic disciplines. This may be informed by the nature of the humanity disciplines that are more behaviourally inclined than the scientific based disciplines.

**Table 2: Three Factors Rating of Social Media as Non-formal Interactive Platforms among Undergraduates.**

<b>Variables</b>	<b>Low F (%)</b>	<b>Average F (%)</b>	<b>High F(%)</b>
Awareness	217(19.7)	320 (29.2)	563 (51.2)
Subscription	489 (44.5)	337 (30.6)	274 (24.9)
Utilization	197 (17.9)	301 (27.4)	602 (54.7)

Source: Field Survey,2017

The three factors rating on the context of social media as non-formal interactive platforms among students shown on table 2 above provides three key measures namely; awareness of the social media and its contents, subscription rate which enables access and utilization that determines the interactive components of the social media.

As indicated on table 2 above, the level of awareness was very high (51.2%) relative to average (29.1%) and low level of awareness (19.7%) on the contents of social media as non-formal platforms for learning engagement, civic participation and interactive learning among undergraduates students in the university. This result corroborated the research by Kietzmann and Jan, (2011) which attested to the high level of awareness of the social media sources where people obtain information, education, news and other data for engagement and other forms of interaction.

In terms of the subscription rate, the result shows that, the rate was low (44.5%) when compared with average (30.6%) and high (24.9%) respectively. This result may be due to financial constraints that limit undergraduates to make regular subscription as free access in most cases is not available. Besides, there is serious dearth of infrastructure to support access to free access to social media platforms for active participation in the academic environment. The consequences of this low rate of subscription is that, there is poverty of information on education and learning contents, which culminates into social exclusion and other forms of deprivations among communities of learners.

The third variable is the utilization of the social media platforms for learning and educational engagement. The result shows that the level of utilization was high (54.7%) as against the rating of the lower ranking (17.9%). Thus, the uses of social media among undergraduates for social interaction, interactive learning and educational engagement were high. The utilization ranking above aligns with the study of Moran et al (2012) who reported that one in four people spend more time socializing and learning online than they do in person. This lay credence to the relevance of the social media as non-formal interactive platforms for educational engagement.

**Results of Hypotheses**

Table 3 below shows the correlation between social media platforms and educational engagement among undergraduates as determined alongside the variables of predictor and criterion that takes into cognizance three hypotheses postulated for the study using the Spearman’s rank order correlation coefficient at 95% confidence interval and 0.5 level of significance given the non-directional characteristics of the assumptions. The  $P < 0.05 < p$  critical region was adopted as the decision rule in the acceptance (where  $p > 0.05$ ) or rejection (where  $p < 0.05$ ) of the assumptions.

**Table 3: Test of Hypotheses**

Variables	Test	Social media platforms	Educational engagement	Interactive learning	Civic Engagement
Social Media Coef.	Spearman's Pearson corr. Sig (2-tailed)	1, 000 .000			
Educational engagement coef.	Spearman's Pearson corr. (2-tailed)	500** .000	1.000		
Interactive Learning Coef	Spearman's Pearson corr. Sig (2-tailed)	.890 .000	.489** .000	1.000 .000	
Civic engagement coef	Spearman's Pearson corr. Sig (2-tailed)	.302** .000	.872** .000	.262** .000	1.000 .000

### ***Discussion of Results***

Table 3 shows the results of the three hypotheses tested. First as indicative of the test, the result shows that, there was a significant correlation between social media platforms and educational engagement among undergraduates ( $r = 500$ ;  $p < 0.05$ ). Thus, the null hypothesis is rejected. Secondly, a correlation test on the relationship between social media platforms and interactive learning among undergraduates shows a significant association as  $r = 0.890$ ;  $p < 0.05$ . Thirdly, the test on the correlation between social media platforms and enhancement of civic engagement, shows a significant result with ( $r = 302$ ;  $p < 0.05$ ). The implications of the results are that, first, all the hypotheses were rejected. These results aligned with evidences from past studies on the efficacy of social media platforms and availability of educational and learning materials, literature and educational data (Stout, 2010; Kross and Verduyn, 2013; Froeses et al, 2009; 2011).

Studies also underscore the capacity of social media platforms to promote significant non-formal interactive learning among adults and young persons of all ages. Such tools as facebook, twitter, instagram, blog, wikipedia among others, are platforms that make access to learning contents very easy and friendly to a wide range of campus students globally (Turkle, 2011; Munoz and Wrigley, 2012; Halliru, 2015). In terms of deliberative civic engagement (Nabatchi, 2014), studies support the fact that there are high level dialogue, debate, discourse and participatory discourse using the online social media platforms (Lebedko, 2011; Guo-Ming, 2012). Also, it can be supported that assignments given on social media do not only strengthen the site's psychology related contents, but also provide opportunity for students to engage in critical reflection about contributions involved in collaborative knowledge production.

### ***Conclusion and Recommendations***

This research concludes that social media serve as non-formal education interactive platforms that have the capacity to enhance learning engagement, interactive learning and civic engagement. The essence is to promote collaboration, dialogue, and participatory learning among campus audience. Thus, the variables measured in this study were basic to the on-going discourse on the generational shift from a knowledge society to a network society where all form of interactions are determined and shaped by data within space and time. It is therefore recommended that, all forms of engagements on the social media platform should be based on development information, diffusion of learning innovations and massification of knowledge enrichment. Also, access to social media should be free on campus to reduce the cost of data subscription among undergraduates. This would further open the space for greater numbers of social media users for interactive learning, educational and civic engagements respectively.



## References

- Boyd, D.M., & Ellison, N. B. (2007). Social network sites. Definition, history and scholarship. *Journal of Computer-mediated Communication*. 13(1):210-230.
- Buetner, R.(2016). Getting a job via careere-oriented social networking sites. The weakness of ties. 49<sup>th</sup> Annual Hawaii International Conference on System Science. Kauai. Hawaii
- De Jaegher,H. & Di Paolo, E. A. (2007). Participatory sense-making. An enactive approach to social cognition. *Phenomenological and the Cognitive Science*. 6(4): 485-507
- De Jaegher,H. & Di Paolo, E. A.& Gallagher, S.(2010). Can social media interaction constitute social cognition? *Trends in Cognitive Science*. 14(10):440-447
- Frifh, C. D. (2008). Social cognition. Philosophical transactions of the royal society B. *Biological Sciences*.363, 2033-2039
- Froese, T. & Fuchs, T.(2012). The extended body: A case study in the neurophenomenology of social interaction. *Phenomenology and the Cognitive Sciences*. 11(2):205-235
- Froese, T. & Gallagher, S. (2012). Getting interaction theory (IT) together. Integrating developmental, phenomenological, enactive and dynamical approaches to social interaction. *Interaction studies*. 153:436-468. John Benjamins Publishing Company.
- Froese, T. & Di Paolo, E. A (2009). Sociality and the life mind continuity thesis. *Phenemenology and the Cognitive Sciences*. 8(4): 439-463.
- Froese, T. & Di Paolo, E. A (2011).The enactive approach: Theoretical sketches from cell to society. *Pragmatic Cognition*. 19(1):1-36.
- Fuchs, T. & De Jaegher, H. (2009). Enacting inter-subjectivity: Participatory sense-making and mutual incorporation. *Phenomenology and the Cognitive Science*. 8(4):465-486
- Gallagher, S. & Hutton, D.D (2008). Understanding others through primary interaction and narrative practice.. J. Zlatos, P. Racine, C. Sinha & E.Itkonen (Eds). *The shared mind: Perspectives on intersubjectivity* . Amsterdam: John Benjamins: pp 07-38
- Golzman, A. (2006). *Simulating minds. The philosophy, psychology and neuroscience of mind-reading*. New York, NY: Oxford University Press
- Guo-Ming, G. (2012). The Impact of new media on intercultural communication in global context. *China media Research* 8(2): 1-10.
- Halliru, S. (2015). Social media, civic engagement and lifelong learning in contemporary world: An implication for experimental learning in adult education practice. (Adult Education in Nigeria). *Journal of Nigerian National Council for Adult Education*. 20(1):201-207.
- Kietzmann, J. & Kristopher, H. (2011). Social media? Get serious understanding the functional sbuilding blocks of social media. *Business Horizons* 54, 241-251.
- Kaplan, A. M. (2012). If you love something, let it go mobile: mobile marketing and mobile social media 4x4. *Business Horizons* 55(2): 129-139. Retrieved 9 December 2012.
- Kaplan, A.M. &Haenian, M. (2010). Users of the world unite: the challenges and opportunities of social media. *Business Horizons* 53(1):61.
- Kross, E. & Verduyn, P.(2013). Facebook use predicts decline in subjective well-being in young adults. PLOS ONE: *Public Library of Science*. 13, August. Web. 27 Apr. 2014
- Lebedko, M. (2014). Globalization, networking and intercultural communication. *Intercultural Communication Studies* 23(1): 28-41.
- Livingston, S. & Markham, T. (2010). The contribution of media consumption to civic participation. *British Journal of Sociology*. 59 (2): 351-371.
- Moran, M; Seaman, J. & Tinti-Kane, H. (2012). How today's higher education faculty use social media. (PDF). *Personalearningsolution.com*
- Moody, M. (2010). Teaching twitter and beyond: Tip for incorporating social media in traditional courses. *Journal of Magazine & New Media Research* 11(2):1-9.
- Munoz, L. & Wrigley, H. S. (2012). The varieties of adult civic engagement in adult learning. *New Directions for Adult and Continuing Education*, 135, 811-86.
- Nabatchi,T. (2104). Deliberative civic engagement in public administration and policy. *Journal of Public Deliberation*. 10(1), 1-3

- Obar, J. A. & Wildman, S. (2015). Social media definition and the governance challenge: An introduction to the special issue. *Telecommunications Policy* 39(9): 745-750.
- Oghenekohwo, J. E. (2013). Adult learning in the context of comparative higher education. *Procedial Social and Behavioural Sciences*. 106, 338-347
- Sherer, P. & Shea T. (2011). Using online video to support student learning and engagement. *Journal of College Science Teaching* 59(2), 56-59.
- Rheingold, H. (2008). Using participatory media and public voice to encourage civic engagement: learning how digital media can engage youth. *Civic life online*, 97-118.
- Sherer, P. & Shea T. (2011). Using online video to support student learning and engagement. *Journal of College Science Teaching* 59(2), 56-59.
- Subrahmanyam, K. & Greenfield, P.M. (2008). Online communication and Adolescent Relationship. *The Future of Children*. N.P., Spring Web. 29 Apr. 2014.
- Stout, H. (2010). Antisocial network? *The New York Times*. wb. 27 Apr. 2014.
- Stout, R. (2012). What someone behavior must be like if we are to be aware of their emotions in it. *Phenomenology and the Cognitive Science*. 11(2):135-148.
- Thompson, E. (2011). Empathy and consciousness. *Journal of Consciousness Study*. 8(5-7), 1-32
- Torance, S. & Froese, T. (2011). An inter-enactive approach to agency: Participatory sense making, dynamics and sociality. *Human Mente*. 15, 21-53
- Tufekci, Z. & Christopher, W. (2012). Social media and the decision to participate in political protest: observation from Tahrir square. *Journal of communication*, 62, 363-379
- Turkle, S. (2011). *Alone together- why we expect more from technology and less from each other*. New York: Basic Books