Perceived Impact of Information and Communication Technology in Enhancing Entrepreneurship in Sports among Health and Physical Education Teachers in Anambra State, Nigeria

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ABSTRACT

The growth of information and communication technology (ICT) has given rise to digitization of information. With this, more entrepreneurs are increasingly leveraging the benefits of ICT tools to improve their business. The study investigated the perceived impact of Information and Communication Technologies (ICTs) in enhancing entrepreneurship in sports among Health and Physical Education (HPE) Teachers in Anambra State, Nigeria. The research design adopted for this study was a descriptive survey. The total population for the study comprised of 1378 Health and Physical Education teachers in Anambra State. The sample size of the study consists of three hundred (300) Health and Physical Education Teachers in Anambra State. This sample size is in line with the suggestion of Cohen, Mannion and Morrison (2011), that when the population size is 1300 and above at 95% confidence level (5% confidence interval), the sample size should be 297 and above. Three (3) research questions guided the study. One null hypothesis was tested at 0.5 level of significance using t-test and ANOVA. The instrument used for data collection was a structured questionnaire with a reliability index of 0.83. Mean and Standard deviation were used to analyze the data collected on the research questions. The criterion mean of 2.5 was used to judge the responses as to whether they were negative or positive. The findings revealed that there is a great impact of ICT in enhancing entrepreneurship in sports. Based on the findings, it was recommended that Government, institutions and stakeholders should incorporate ICT skills in HPE curriculum at all levels of education.

Keywords: Information and Communication Technologies, Entrepreneurship, Sports
INTRODUCTION

Globally, Sports industry has developed into big business which individuals can engage for entrepreneurship ventures. This venture helps in promoting the economic growth of any nation as individuals could harness different sports products and services for entrepreneurship purposes. Sports products and services could ranges from different categories of goods, services, people, places and ideas to the target consumers with the sole aim of generating revenue. Plunkett Research (2009) in Cilett (n.d) noted that “sports provide a lucrative and continually growing marketplace worthy of immense investments, providing not only economic impact, but also entertainment for millions of people globally”. There has been a rapid and extensive growth in sports industry especially in the present technology-driven environment. Sport is an integral part of the larger society. According to Eze (2015), Sports could be considered as the organized physical activities through which exercise amusement, fun and play are enjoyed. Individual who engage in harnessing sports activities to produce products and services to maximize profit could be seen as sports entrepreneurs.

An entrepreneur is a person who develops a new idea and takes the risk of setting up an enterprise to produce a product or service which satisfies customers' needs. He is the highly visible hand that ensures co-ordination between producers and consumers, (Eze, 2015). An entrepreneur is therefore a person, an initiator of business ventures who identifies and harness opportunities and bearing the risk to produce goods and services in order to satisfy the needs of the consumers to maximize profit. Sports entrepreneurs are therefore managers, risk takers that engage in marketing of sports products and services to satisfy customers need and to maximize profit. Sahay (2010) assert that entrepreneurs are risk-bearers, coordinators and organizers, gap fillers, leaders and innovators or creative initiators.

Entrepreneurship is recognized as the pivot point for economic growth globally. It is a driving force that promotes innovative activities essential for sustainable national development. Entrepreneurship could be seen as the all the processes, actions, efforts, skills, abilities which an entrepreneur use in combining resources to produce goods and services within investment and business opportunities. It is the acquisition of skills that enables an individual to engage in the establishment and risk of any profitable enterprise. It fundamentally requires skill acquisition, critical thinking to know business opportunities, planning to map out strategies to execute them, creative and innovative skills to develop new products. Ayeduso in Osuala (2004) stated that
while the word entrepreneur describes the person or the actor, entrepreneurship talks about the actions, efforts, abilities, skills, processes or sometimes the business unit itself. Entrepreneurship is a critical factor in economic development as it encourages job creation for sustainable development. The Small and Medium Enterprise Development Agency (SMEDA, 2004) stated that entrepreneurship develops when a person organizes and manages a commercial undertaking. SMEDA also noted that entrepreneurship combines strong character of diligence, innovativeness, readiness to take risk, ability to sense opportunity, ability to mobilize human and material resources, being goal-oriented and focused, preserving and dogged for growth and excellence.

The European Commission defines entrepreneurship as:

> an individual’s ability to turn ideas into action. It includes creativity, innovation and taking calculated risk, as well as the ability to plan and manage projects in order to achieve objectives. This supports everyone in day-to-day life at home and in society; makes employees more aware of the context of their work and better able to seize opportunities, and provides a foundation for entrepreneurs establishing a social or commercial activity... (Europa Commission, 2008)

Entrepreneurship occurs in all facet of human endeavor, in businesses, government and non-governmental organization, in academy, sports and every aspect of human life.

Sport entrepreneurship is the marketing of sports products and services to satisfy the sports needs of individuals and for profit making. Sports entrepreneurship provides opportunities to promote innovations, investments, competiveness and sustenance of sports business ventures. Sports entrepreneurship could be seen as a means of marketing sports as a product and services to satisfy the needs of sports consumers through an exchange process. Akarah (2007) defined effective sports marketing in Nigeria to be; sports activities designed by the Nigeria sports sector to meet the sports needs and wants of sports consumers through exchange processes that are aimed at generating revenue that will boost the Nigeria economy. Akarah (2010) noted that the Nigeria government is the sole proprietor and financier of sports and as such, there is low competition in the aspect of marketing sports as a product, especially in relation to the sports market mix using the four Ps (product, price, promotion, place) and the attendant competition that would arise if other stakeholders were to be involved in the funding and organization of sports. Eze (2015) noted that Nigeria has joined the developed world to run sports as a business and profitable venture. Sport entrepreneurship is characterized by intense and continuous pro-
activity, innovation, and risk-taking behaviors, related to the discovery and exploitation of new markets, technologies, product opportunities, and human capital (Ratten, 2010).

Entrepreneurship in sports entails creating opportunities for new ventures and creating a market niche for income. Howard (2010) stressed that Sports marketers have had to become much more entrepreneurial to create competitive advantage for sports organizations and deliver relationship value to consumers. Sports-marketing is an entrepreneurial venture which focuses both on the promotion of sports events and teams as well as the promotion of other products and services through sporting events and sports teams. It is a service in which the element promoted can be a physical product or a brand name. The goal is to enable an entrepreneur to promote sports products and service to maximize profit. Sports-marketing according to Lovelock (2004), is also designed to meet the needs and wants of the consumers through exchange processes. In a study by Adigun and Akinbinu (2017) they found that broadcast advertising expedites business with the use of appropriate ICT facilities. Also, Mullin (2014) noted that sports marketing is an element of sports promotion which involves a wide variety of sectors of the sports industry, including broadcasting, advertising, social media, digital platforms, ticket sales, and community relations. The development of human capital is very critical in sports entrepreneurship. Human capital represents the knowledge, skills and abilities that individuals acquire from education and work experience (Marvel et al., 2014; Unger et al., 2011). Europa Conference (2018) assert that it is widely recognized that the benefits of entrepreneurship education are not limited to the creation of new business ventures and subsequent new jobs, but will also develop key competencies of students, encourage innovative mind sets and as a consequence enable them to be more creative and self-confident in whatever they undertake. Consequently, training and retraining of health and physical education teachers, undergraduates as well as graduates on ICT skill acquisition is a critical factor in promoting entrepreneurship in sports industry.

There is a growing importance of Information and Communication Technologies in all sphere of life. ICT has provided unprecedented new opportunities for entrepreneurs in the field of sports as it has immensely contributed to the growth and development of sports industry. ICTs provide dynamic and unique opportunities in enhancing entrepreneurship in sports. Okeke (2014). ICT have become the modern-day strategy to capture the market because of the potentials it can offer to enhance entrepreneurship. The sports industry is increasingly leveraging on the benefits of cloud computing for easy services. Cloud computing is the practice of using a
network of remote servers hosted on the Internet to store, manage, and process data, rather than a local server or a personal computer. Cloud computing facilitates access to sports information and data from any location worldwide. It helps in saving the cost of acquiring and maintaining hardware and software. It facilitates access to sports data from any location worldwide and from any device with the availability of internet connection. It helps in preservation, sports data backup and ensures data recovery.

Customer satisfaction is another area ICT has been proven to enhance entrepreneurship. Otiso, Chelangat and Bonuke (2012) investigated the effects of the perceived ICT service quality and its effects on customer satisfaction. The study established that as the ICT service delivery increases, so does the customer satisfaction. In other words, to enhance customer satisfaction, there is need to increase ICT service delivery. The ICT service delivery affects customer satisfaction. In a related study, Kabanda (2014) reported that ICT positively affects customer satisfaction. ICT also enhances the ease of carrying out business.

In addition, ICT have created opportunities for sports equipment entrepreneurs to advertise their business online. This allows wide visibility and remote access for the product. People can order for sports equipment such as footballs, tennis, rackets and basketball and make online payment without the barrier of physical boundary. In the area of sports equipment design, technology is also playing a growing impact. The application of ICT to sports serves a role in creating whole new opportunities for entrepreneurs and provides sports events and tools such as Computer Assisted Design (CAD) which can play a very important role in sports equipment (Rosandich, 2000).

From the foregoing, the acceptance or application of ICT tools in entrepreneurial service delivery is therefore very important. Being a relatively new innovation, the adoption of ICT to improve business enterprises will have to be a gradual process. The diffusion and adoption of ICT innovations permeate through a social system that positively affects customer satisfaction and support customer service excellence (Kabanda, 2014). The Diffusion of innovation theory by Rogers (2003) analyzes as well as explains the adaptation of a new innovation. According to Rogers Diffusion is the process in which an innovation is communicated through certain channels over time among the members of a social system. In this study such channels include
the mobile hand-held devices, internet facilities and other ICT tools. Hence this study is anchored on the Diffusion of Innovation Theory.

**Statement of the Problem**

Nigeria is facing a very serious challenge of unemployment as most youth are not gainfully employed. Sports entrepreneurship plays a pivotal role in fostering creativities, encouraging innovation and development, increasing self-reliance, value and creating wealth in the society for sustainable national development. Sports industry has the potential to create employment opportunities for several people. Apart from the sports players, there are a lot of businesses and entrepreneurship sports opportunities in Nigeria which has remained untapped. These include jobs for coaches, sports managers, commentators, merchandisers, manufacturers of sports products such as sports attire, equipment, medical professionals, journalists, media etc.

Notwithstanding all the potentials and job opportunities inherent in sports industry, it seems that most people lack the entrepreneurial and ICT skills to tap into this venture. It is on this note that the researchers investigated the perceived impact of Information and Communication Technology in enhancing entrepreneurship in sports among health and physical education teachers in Anambra State, Nigeria.

**Purpose of the Study**

The purpose of this study is to investigate the perceptions of the impact of Information and Communication Technologies (ICTs) in enhancing entrepreneurship in sports among Health and Physical Education (HPE) Teachers in Anambra State, Nigeria. Specifically, the study is set to investigate the perceived impact of:

1. ICT in enhancing customer satisfaction in sports enterprises among Health and Physical Education (HPE) Teachers in Anambra State;
2. ICT in enhancing marketing of sports enterprises among Health and Physical Education (HPE) Teachers in Anambra State; and
3. ICT in enhancing ease of sports business transactions among Health and Physical Education (HPE) Teachers in Anambra State.

**Research Questions**

The following research questions guided the study:

1. What are the perceived impact of ICT in enhancing customer satisfaction in sports enterprises among Health and Physical Education (HPE) Teachers in Anambra State?
2. What are the perceived impact of ICT in enhancing marketing of sports enterprises among Health and Physical Education (HPE) Teachers in Anambra State?

3. What are the perceived impact of ICT in enhancing ease of sports business transactions among Health and Physical Education (HPE) Teachers in Anambra State?

**Hypothesis**

The following hypothesis was tested at 0.05 level of significance:

\( H_01: \) There is no significant difference between the mean ratings of male and female health and physical education teachers on the perceived impact of Information and Communication Technologies in enhancing entrepreneurship in sports.

**Methods**

The descriptive research design was adopted for the study. This design according to Springer (2010), allows the quantitative description of phenomena through collection and analysis of valid data. The total population for the study comprised of 1,378 Health and Physical Education teachers in Anambra State. The sample size of the study consists of three hundred (300) Health and Physical Education Teachers in Anambra State. This sample size is in line with the suggestion of Cohen, Mannion and Morrison (2011), that when the population size is 1300 and above at 95% confidence level (5% confidence interval), the sample size should be 297 and above. Instrument for data collection was a questionnaire tagged Perceived Impact of Information and Communication Technologies (ICTs) in Entrepreneurship in Sports Questionnaire (PIICTESQ). The validity of the instrument was established through the judgments of five experts – two from the Department of Human Kinetics and Health Education, two from the Department of Library and Information Services, and one from Department of Science Education (Measurement and Evaluation), from the University of Nigeria, Nsukka. The reliability coefficient of the instrument was established through the Cronbach Alpha Statistics. The correlation coefficient index of 0.83 was obtained. The instrument was therefore considered reliable for the study.

Three hundred copies of the questionnaire were administered on the respondents. Two hundred and ninety-four were returned. After screening of the returned copies of the questionnaire, a total of 285 were dully completed and thus were used for data analysis. Data were analyzed using mean and standard deviation. Response options of the questionnaire – Strongly Agree, Agree, Disagree and Strongly Disagree were assigned values of 4, 3, 2, and 1.
respectively. In determining the perception of the respondents, mean score for each item or grand mean each cluster was used. The criterion mean value was accomplished by summing up 4, 3, 2 and 1 and dividing by 4 (i.e. $4+3+2+1=10 \div 4 = 2.50$). This was used to answer the research questions. The t-test was used to test the null hypotheses at 0.05 alpha level.

Results and Findings

Table 1
Mean Ratings of Teachers on perceived impact of ICT in enhancing customer satisfaction in sports enterprises

<table>
<thead>
<tr>
<th>S/N</th>
<th>Perceived impact of ICT in enhancing customer satisfaction in sports enterprises</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>ICT reduces the risk of carrying bulk cash by customers, through the use of e-payments and Point of Sale (POS) service</td>
<td>3.50 0.51</td>
</tr>
<tr>
<td>2.</td>
<td>ICT provides easy access to shops through on-line shopping</td>
<td>3.46 0.55</td>
</tr>
<tr>
<td>3.</td>
<td>ICT eliminates physical boundaries in business transactions by customers</td>
<td>3.45 0.56</td>
</tr>
</tbody>
</table>

Cluster Mean 3.47 0.54

Data in Table 1 show that Health and Physical education teachers had an overall mean response of 3.47 (SD = 0.54). This is above the criterion mean value of 2.50. This means that the Health and Physical education teachers perceived that ICT enhances customer satisfaction in sports enterprises. However, the Table shows that all the items in the table had mean responses which were above the criterion mean as follows: ICT reduces the risk of carrying bulk cash by customers, through the use of e-payments and Point of Sale (POS) service (= 3.50, SD = 0.51); ICT provides easy access to shops through on-line shopping (= 3.46, SD = 0.55) and ICT eliminates physical boundaries in business transactions by customers (= 3.45, SD = 0.56). The SD values, which ranged from 0.51 to 0.56, showed that the responses of the respondents were close to one another.

Table 2
Mean Ratings of Teachers on perceived impact of ICT in enhancing marketing of sports enterprises

<table>
<thead>
<tr>
<th>S/N</th>
<th>Perceived impact of ICT in enhancing marketing of sports enterprises</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td>ICT increases customer outreach through online advertisement of sports wears, equipment and facilities</td>
<td>3.44 0.57</td>
</tr>
<tr>
<td>5.</td>
<td>ICT enhances wide visibility and remote access for sports products and services</td>
<td>3.38 0.59</td>
</tr>
</tbody>
</table>
ICT enhances reduction in cost of advertisement of sports products and services (3.36, SD = 0.61).

Table 2 indicate that Health and Physical education teachers had an overall mean response of 3.39 (SD = 0.58) which is above the criterion mean value of 2.50. This means that the Health and Physical education teachers perceived that ICT enhances marketing of sports enterprises. However, the Table shows that all the items in the table had mean responses which were above the criterion mean as follows: ICT increases customer outreach through online advertisement of sports wears, equipment and facilities ( = 3.44, SD = 0.57); ICT enhances wide visibility and remote access for sports products and services ( = 3.38, SD = 0.59) and ICT enhances reduction in cost of advertisement of sports products and services ( = 3.36, SD = 0.61). The Table further revealed that the SD values range from 0.57 to 0.61. This shows that the responses of the respondents were close to each other.

Table 3
Mean Ratings of Teachers on perceived impact of ICT in enhancing ease of sports business transactions

<table>
<thead>
<tr>
<th>S/N</th>
<th>Perceived impact of ICT in enhancing ease of sports business transactions</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>ICT enhances the ability of entrepreneurs to access their shops and goods without being physically present in the shop</td>
<td>2.98</td>
</tr>
<tr>
<td>8.</td>
<td>ICT saves time through automated billings, e-banking and e-payment services</td>
<td>3.28</td>
</tr>
<tr>
<td>9.</td>
<td>ICT enhances record keeping, data backup and ensures data recovery</td>
<td>3.41</td>
</tr>
<tr>
<td>10.</td>
<td>ICT reduces cost of operating business</td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td><strong>Cluster Mean</strong></td>
<td><strong>3.16</strong></td>
</tr>
</tbody>
</table>

Results in Table 3 show that Health and Physical education teachers perceived that ICT enhances ease of sports business transactions (Cluster mean = 3.16, which is greater than 2.50; SD = 0.67). The Table further shows that the teachers had mean responses above the criterion mean of 2.50 in all the items on the Table. This implies that the respondents agree with the statements of the items. The SD values which range from 0.58 to 0.77 shows the disparity in the responses of the teachers.
Table 4: Result of T-test analysis testing the hypothesis of no significant difference between the mean ratings of male and female health and physical education teachers on the perceived impact of Information and Communication Technologies in enhancing entrepreneurship in sports

<table>
<thead>
<tr>
<th>Variable</th>
<th>Gender</th>
<th>N</th>
<th>SD</th>
<th>t-cal</th>
<th>Df</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction in sports enterprises</td>
<td>Male</td>
<td>96</td>
<td>78.83</td>
<td>3.44</td>
<td>2.96</td>
<td>.004</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>189</td>
<td>83.60</td>
<td>4.01</td>
<td>283</td>
<td></td>
</tr>
</tbody>
</table>

Data in Table 4 show the t-calculated and the corresponding p-value for the perceived impact of Information and Communication Technologies in enhancing entrepreneurship in sports (t-cal. = 2.96, p = .004). Since the p-value is less than 0.05 level of significance, the null hypothesis of no significant difference between ratings of male and female health and physical education teachers on the perceived impact of ICT in enhancing entrepreneurship in sports is therefore rejected.

Discussion

Table 1 show that Health and Physical education teachers perceived that ICT enhances customer satisfaction in sports enterprises ( = 3.47, SD = 0.54). This is not surprising but expected. The influx of mobile devices which most times are internet enabled has made life much less cumbersome as one can easily shop online, make payments and transfer money either from mobile phone or via the POS. This includes customer satisfaction during sports shopping. This finding is in line with Kabanda (2014) who reported that ICT positively affects customer satisfaction.

Results in Table 2 indicate that Health and Physical education teachers perceived that ICT enhances marketing of sports enterprises ( = 3.39, SD = 0.58). This finding is also not surprising, but expected. This is because most business outfits now take advantage of the mobile hand-held electronic devices to send bulk messages which include advertorials. This finding agrees with Adigun and Akinbinu (2017) who in a study found that broadcast advertising are likely to expedite business with the use of appropriate ICT facilities.

Results in Table 3 show that Health and Physical education teachers perceived that ICT enhances ease of sports business transactions ( = 3.16, SD = 0.67). That the teachers agree with this view is not surprising. ICT especially when it is internet enabled has made life generally to be easier. This agrees with the findings of Olatunji (2015) who reported that the use of Information Communication Technology by Small and Medium Scale Enterprise opens up new opportunities, reduces inventories as well as makes their services more tradable.
The test of hypothesis of no significant difference between the mean ratings of male and female health and physical education teachers on the perceived impact of ICT in enhancing entrepreneurship in sports revealed that the p-value of 0.004 is less than 0.05 level of significance. This hypothesis was rejected. The implication of this is that the perceived impact of ICT in enhancing entrepreneurship in sports among Health and Physical Education Teachers in Anambra State differ based on gender. This may be due to gender differences in the use of ICT tools. Gender disparity can also be seen in the area of ICT. Wajcman (2006) observed that many feminists believe that western technology embodies patriarchal values and as such most women are reluctant to go into technology because of the sex-stereotyped definition of technology as an activity appropriate for men. The findings however, disagrees with Rummana, et al. (2011) who reported that overall ICT usage, usage of basic and advanced systems, and systems usage for administrative, planning, and control purposes do not differ based on gender.

Conclusions

The study examined the perceived impact of Information and Communication Technologies (ICTs) in enhancing entrepreneurship in sports among Health and Physical Education (HPE) Teachers in Anambra State, Nigeria. The findings indicated that they demonstrated high level of perception of the positive impact of ICT in customer satisfaction, marketing of sports products and services, and ease of transacting business. The study also revealed that there is significant difference between the mean ratings of male and female Health and Physical Education teachers on perceived impact of ICT in enhancing entrepreneurship in sports.

Recommendations

Based on the conclusions, the researchers recommend that strategies be put in place to encourage graduates who are into entrepreneurial practices to utilize ICT tools in their business enterprises. Also, Government, institutions and stakeholders should incorporate ICT skills in HPE curriculum at all levels of education.
References


