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Utilization of Information and Communication Technologies for Naval Training Programmes in Nigeria.

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ABSTRACT

Purpose*: This study examined the utilization of Information and Communication Technology (ICT) for naval training programmes in Nigeria. The purposes of this research were to: ascertain ICT facilities available for naval training programmes in the four training schools, ascertain the naval instructors' and trainees' competences in the utilization of ICT for naval training programmes, identify problems associated with the utilization of ICTs in naval training programmes and proffer strategies for the utilization of ICT in naval training programmes in Nigeria.*

Methodology: *Six research questions guided the study. The descriptive survey research design was adopted for the study. The population of the study comprised 665 respondents consist of 599 trainees and 66 instructors. The instruments for data collection were the questionnaire of a four-point rating. On the spot method of data collection was adopted to administer the instruments. Tools used for data analyses of research questions were frequency, percentage, mean and standard deviation*

Findings: *The results revealed that the ICT facilities available are limited, for effective training in the six areas of specialisation for naval training programmes in Nigeria. Five major challenges associated with the utilisation of ICT for naval training were identified by respondents in the four training schools. These are the lack of fully equipped ICT centres and poor power supply among others. The instructors and trainees in the study area proffered six major strategies for effective utilization of ICT in naval training programmes in Nigeria. These are the provision of sufficient ICT facilities, adequate and effective internet service (broad bandwidth) with constant power supply among others.*

Implications: *Based on the findings, for the NN to be efficient and relevant in joint operations with other Navies of the world and also achieve operational efficiency locally at sea and ashore, the proffered six strategies should be implemented.*

Originality/Value:*This research has not been published in any journal before. Its originality lies in its ability to enable the NN fully embrace the utilisation of ICT for training to become relevant and effective in joint operations with other navies of the world.*

Keywords: *Information and Communication Technologies (ICTs), Training, Naval Training, Utilisation of Information and Communication Technologies.*

Introduction

Information and Communication Technology (ICT) is a generic term that refers to technologies which are being used for collecting, storing, editing and passing on information in various forms. The term ICT has its origin in Information technology (IT). Information Technology is a term that encompasses all forms of technology used to create, store, exchange, and use information in its various forms (business data, voice conversations, still images, motion pictures, multimedia presentations, and other forms). Essentially, IT is the technology that drives the information revolution. However, as the field of IT evolved, the term Information and Communication Technology are now used instead of Information Technology (IT) to recognise the convergence of traditional information technologies and telecommunications, which were once seen as distinct areas but now have become intertwined with the advancement in technology (Tella, 2011).

Information and Communication Technologies (ICT) consists of the hardware, software, networks, and media used for the collection, storage, processing, transmission and presentation of information (voice, data, text, images), as well as related services. (Hagg, Cummin and Phillip, 2007). For a clearer understanding, ICT is divided into two subcategories, infrastructure and technologies. Technology or Information Technology (IT) on the other hand refers to the hardware and software used for information collection, storage, processing, and presentation. (Hagg, Cummin and Phillip, 2007). The continuous integration of information (data), communications technologies (systems), and the economies to support them creates the ICT Sector.

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The use of ICT at every level of warfare in the military is well known and widely documented (Thomas, 2007; Stauffacher, Drake, Currion and Steinberger 2005). It is a major enabler of Command, Control, Communications, Computers, Information, Surveillance and Reconnaissance (C4ISR). Apart from C4ISR, other uses of ICT range from directing smart weapons by modern armed forces to use of satellite communications by rebel groups in remote areas and triggering of terrorist bombs via mobile phones. (Stauffacher, Drake, Currion and Steinberger 2005). As a sector, a service, and a tool, ICT improves the overall wellbeing of our globally connected society and with the right perception and attitude. The proliferation of computer technology in both our personal and professional lives, and particularly during the last decade, has created an environment in which there are varying perceptions of, and ideas about, the value of Information and Communication Technology (ICT) and computers. To benefit from this, especially in a defence environment, realistic perception of the worth of computers needs to be established (Thomas, 2007).

Perception refers to a person's awareness or appreciation of something (Motswesi, Renken and Neethling, 2006). A wrong perception of the place, importance and relevance of ICT among naval officers could hamper the effectiveness of their service. It is not an understatement to say that the right perception of and attitude to ICT among military personnel is not only desirable but of paramount importance. This is because security issues relating to computer systems, often have a significant impact on the discharge of military duties. Tella, (2012) posits that a good perception of the place of and import of ICT in training is essential if instructor and trainees would put ICT to effective use. In order words, the right perception to ICT precedes effective utilization of ICT.

Furthermore, the effective utilization of ICT in training provides a synergistic solution to the complex problem of managing information flow and the integration of such information to the utmost maximization of the aims of training. Many teacher and instructors in different fields of endeavour are finding unique avenues to utilize ICT in teaching. However, according to Ololube (2006), the level of utilization of ICT in training programmes have not been encouraging because of the limited knowledge of teachers and instructors themselves in ICT and the deficient government policies regarding the role and place of ICT in education, particularly in Nigeria.

Training in the words of Williams and Sawyer, (2002) connotes the impartation of knowledge or skills on individuals who can learn and practise or apply the same to given tasks. This assertion is buttressed by Bakar and Mohammed, (2008) in defining it as a process of imparting knowledge and skill on individuals who can learn and transfer such knowledge and skills on their job to achieve set goals. From this study, training could be seen in the context of continuous acquisition of specialised skill by the Nigerian Navy (NN) personnel for specific tasks. It is a systematic analytical base design of method and media which enable an individual or group to learn pre-determined knowledge or processes against predetermined objective and apply it to the required standard. Thus, training is an ongoing, long term change or evolution that occurs through many learning experiences (Elwood, 2002).

Worldwide, naval training is geared towards the achievement of the three traditional roles of the navies. These include military, diplomatic and policing roles. In particular, the Nigerian Navy (NN) which is the focus of this study, is also saddled with these three major traditional roles of navies worldwide. These are military (defence), diplomatic (flag showing) and policing (protection of all sea resources and free access to the use of the nation's coastal front, territorial waters and the sea), (NNMP, 2000). It has been observed that since the late 80s, the NN gave preference to indigenous training over foreign training. The purpose was to assist the NN to train its personnel to be able to adapt knowledge and skills acquired for operational efficiency on board the available warships, in coastal/creeks areas and for internal security operations in various part of the nations

The NN training schools in the area of this study engage in specialised NN personnel (officers and ratings) training. They include Nigerian Navy Engineering College (NNEC) Sapele, Nigerian Navy Finance and Logistics School (NNFLS) Owerrinta, Nigerian Navy Basic Training School (NNBTS) Onne, Portharcourt and Nigerian Naval College (NNC) Onne. (NNMP,2000). These NN training schools are designated to train and impart naval skills on newly recruited men, cadets, ratings (non-commissioned officers) and officers; commissioned Regular/Combatant (RC) and Direct Short Service Commission (DSSC).

The NN training takes the forms of classroom lectures, drills, simulation, demonstrations onboard and field/sea -trips. However, the NN, through integrated and coordinated use of the ICT in training, can improve its responsiveness to security issues and effectiveness in the discharge of its overall duty to the nation with the increased network capability that ICT offers. ICT also provides the NN ability to

coordinate actions, inform the masses and enable faster response of first-responders where required and it can also help to ensure that the NN can enforce its rule of law through coordination, collaboration, and the ability to keep greater detailed records. With the foregoing, the relevance of utilization of ICT in the training of naval personnel cannot be overemphasized.

Purpose of the Study

The broad purpose of this study is to determine the utilization of ICT for naval training schools' programmes in Nigeria. Specifically, the purposes include:

1. To ascertain the ICT facilities available for utilization in naval training schools' programmes in Nigeria.

2. To ascertain naval instructors' and trainees' competences in the utilization of ICTs in naval training programmes.

3. To determine the extent of the utilization of ICT facilities by trainees and instructors in NN training programmes in the area of study.

4. To assess the perception of NN instructors and trainees for the utilization of ICTs in naval training schools' programmes in the area of study.

5. To identify problems associated with the utilization of ICTs for naval training schools' programme in Nigeria.

6. To proffer strategies for the utilization of ICT in naval training schools' programmes in Nigeria.

Significance of the Study

It is expected that the findings of this work will be useful to the following: naval officers, ratings, naval instructors/trainers, naval training authority, government and librarians. It would provide evidence to the naval training authority on the need for effective integration /utilization of basic ICTs (internet, simulator/micro-worlds, Geographic Information Systems (GIS), telephone and radios) that NN personnel training presently is bereft of. This is the bedrock on which the use of sophisticated ICT facilities would be based in NN operations. Furthermore, the study would awaken the imperative of ICT in the training of NN personnel and gear the Nigerian Navy to include ICT in the training curriculum.

The findings of the research will shed more light on the perception and competence of NN personnel about ICT and this understanding will help to develop strategies to be employed to overcome the challenges for effective and efficient utilization of these ICTs in the training of NN personnel. The result of the research will also provide much-needed information (data) in the literature regarding the utilization of ICT in the military. Besides, the result of the findings of this study can provide a foundation for further research into trends in ICTs usage for naval training, their integration, potentials, as well as their challenges and then serve as an entrance for qualitative naval training in Nigeria comparable with present naval training in developed nations.

Methodology

The descriptive survey research design was adopted for the study. The population of the study comprised 665 respondents consist of 599 trainees and 66 instructors. The instruments for data collection were the questionnaire of a four-point rating. On the spot method of data collection was adopted to administer the instruments. Tools used for data analyses of research questions were frequency, percentage and mean

Results

The results of the study are hereunder presented in tables, graphs and charts following the research questions.

Table 1: Frequency of available ICT facilities for utilisation in naval training schools

S/N	ICT Facilities / Gadgets	NNC Onne	NNBTS Onne	NNFLS Owerrinta	NNEC Sapele	Total
A.	**Computer**					
1.	Laptop computer	60	45	70	125	300
2.	Palmtop Computer	54	7	14	112	187
3.	Desktop computer	58	100	85	145	388
4.	Pocket computer	28	16	06	101	151
5.	Notebook computer	31	18	09	103	161
B.	**Storage Devices**					
6.	Magnetic Disk	54	42	32	127	255
7.	Flash Drive	56	98	84	143	381
8.	CD ROM	63	107	90	150	410
9.	DVD ROM	84	141	56	98	379
C.	**Output Devices**					
10.	Printers	66	110	93	52	321
11.	Monitors (Screen)	95	112	53	68	328
12.	Speakers	84	141	56	98	379
13.	Plotters	55	52	34	137	278
14.	Digital cameras	62	47	72	126	307
15.	Scanners	32	18	11	103	164
16.	Computer Output Microfilm (COM)	51	48	30	132	261
17.	Photocopying/Cyclostyling Machines	32	11	18	102	163
D.	**Telecommunication**					
18.	Telephone/GSM	56	100	85	145	386
19.	Television	49	91	72	135	347
20.	Telex	50	59	54	55	218
21.	Facsimile	26	13	04	98	141
E.	**Internet Facilities**					
22.	World Wide Web	62	47	72	125	306
23.	Local Area Network (LAN)	55	52	34	138	279
24.	Wide Area Network (WAN)	52	40	30	125	247
25.	Value Added Network	54	42	32	127	255
26.	Internet Service Provider	64	49	74	127	314
27.	E- mail facility	69	54	79	131	333

Table 1 shows the frequency of the responses to the availability of ICT facilities for utilization in naval training schools in Nigeria. The result on the table displayed the cluster frequency of the ICT facilities. From the result, computer facilities available in NNC-(58), NNBTS- (100), NNFLS-(85) and NNEC- (145), output facilities available were NNC (51), NNBTS (48), NNFLS (30) and NNEC (132) while internet facilities available were NNC (64), NNBTS (49), NNFLS (74) and NNEC (127). However, storage facilities and telecom facilities were not generally available with storage facilities as follows; NNC (56), NNBTS (98), NNFLS (84) and NNEC (143) and telecom facilities (49, 91, 72 and 135 respectively). On the overall, Table1 revealed that the ICT facilities were available in limited quantities for utilisation in naval training schools in Nigeria as shown in figures 1 to 10 below.

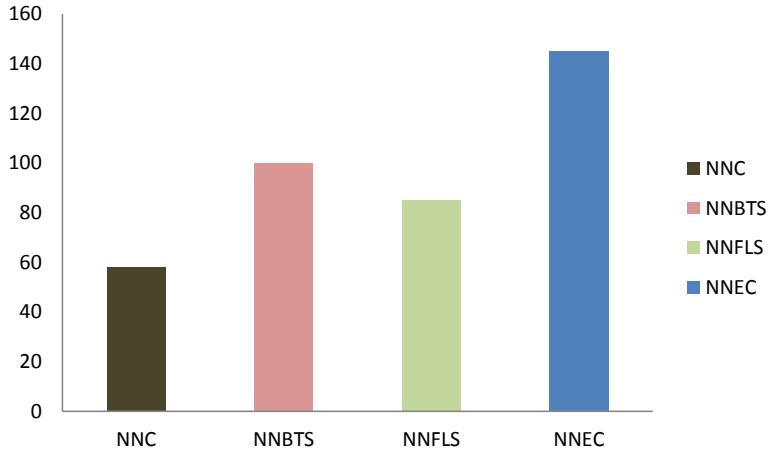

Figure1. **Available Computer Facilities**

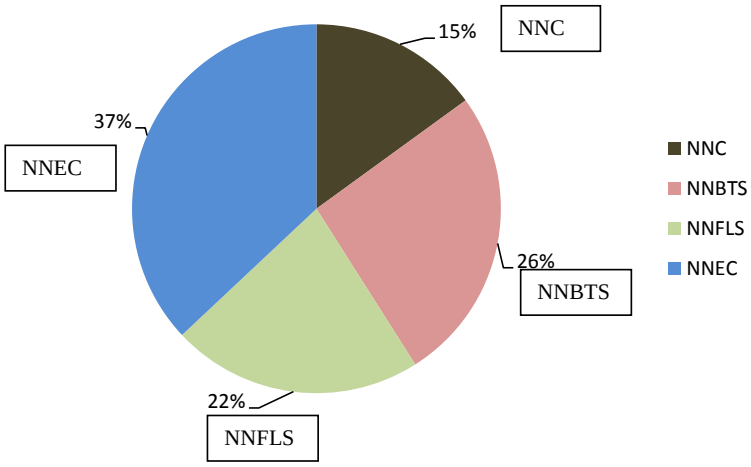

Figure 2.**Available Computer Facilities**

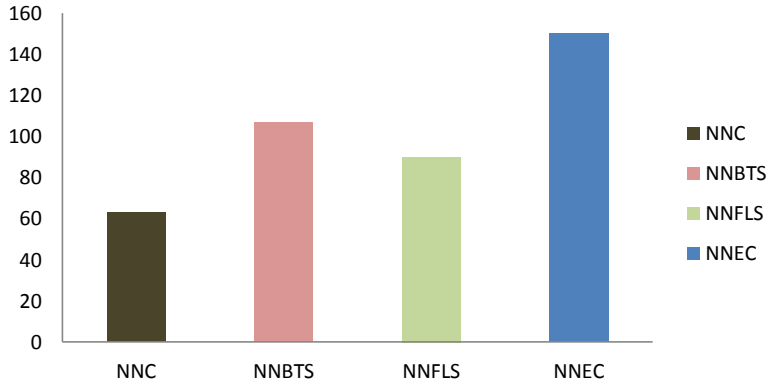

Figure 3. **Available Storage Facilities**

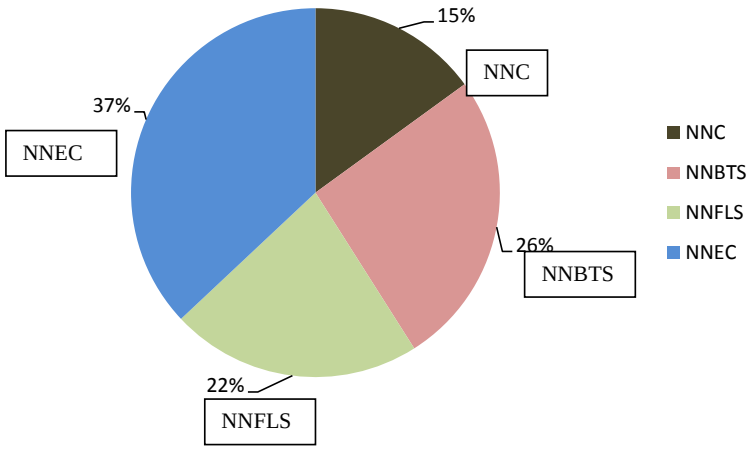

Figure 4. **Available Storage Facilities**

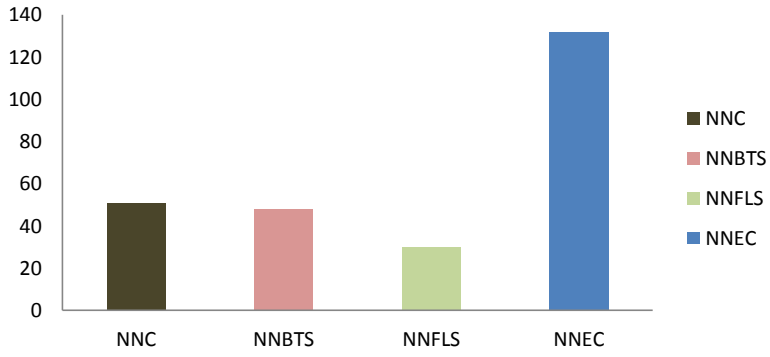

Figure 5.**Available Output Devices**

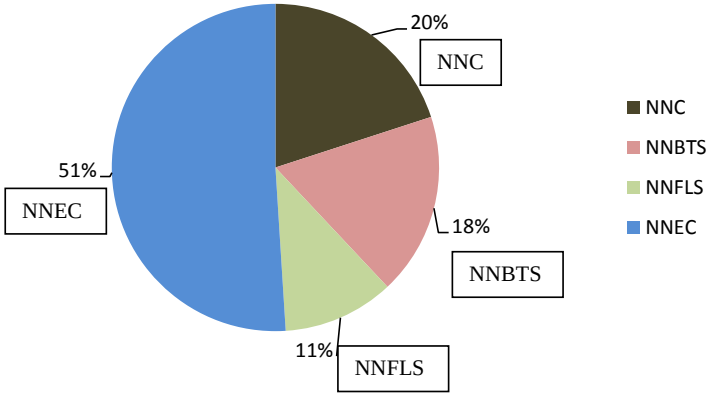

Figure 6.**Available Output Devices**

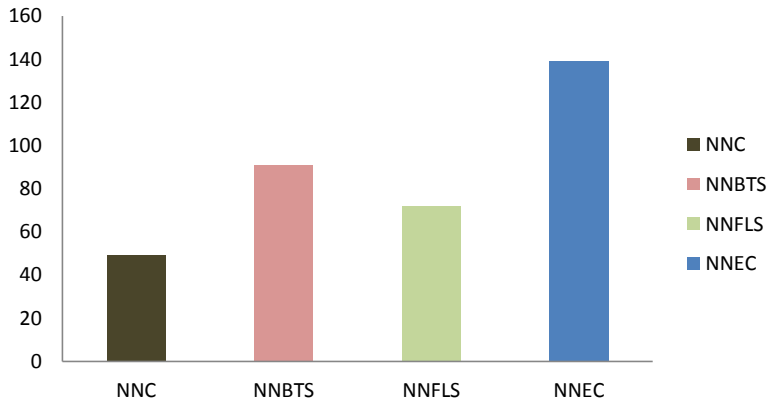

Figure 7.**Telecommunication Devices**

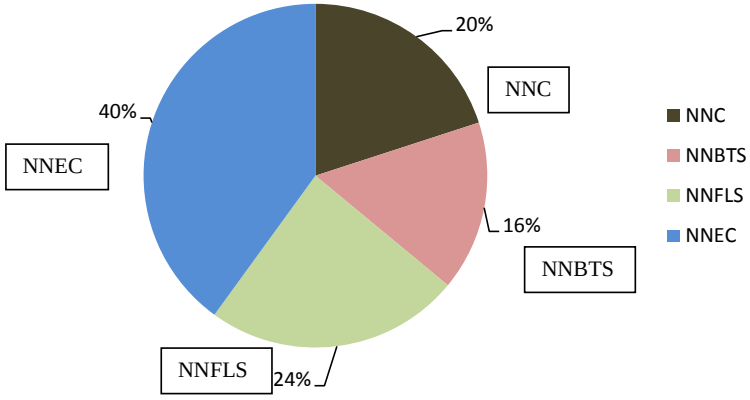

Figure 8. **Telecommunication Devices**

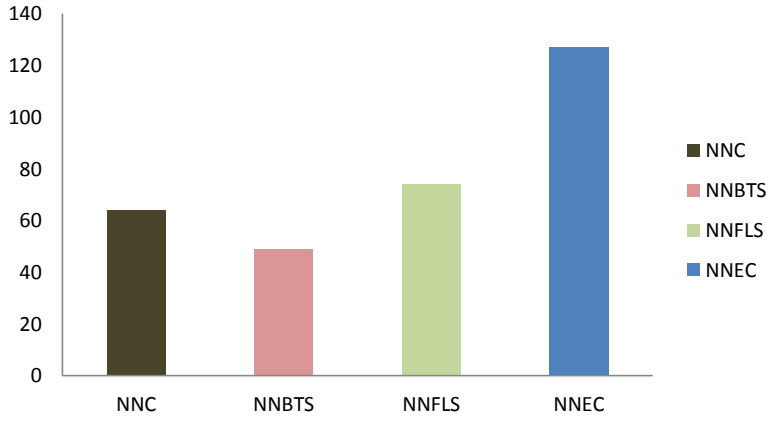

Figure 9.**Available Internet Facilities**

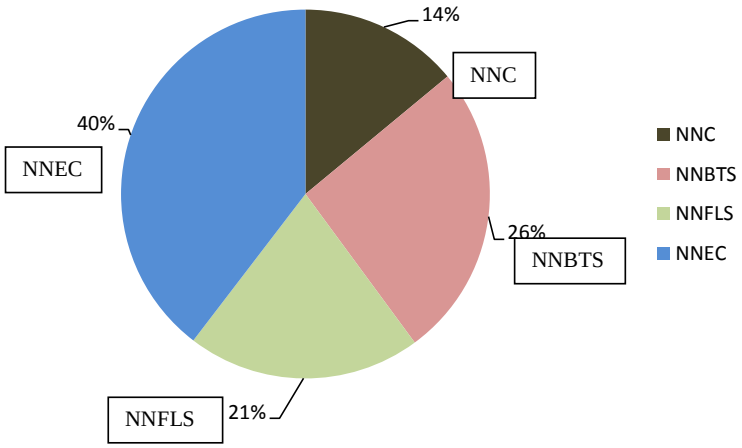

Figure 10.**Available Internet Facilities**

Table 2: Frequency, mean and standard deviation of the response to the human resources (instructors' and trainees') competence in the utilization of ICT (N = 665)

S/N	Computer / ICT Related Skills	HP	MP	LP	NP	Mean	Std. Dev.	Decision
A	**Input / Output Skills**							
1.	My Typing and Printing Skills are	175	275	146	69	2.84	0.93	MP
2.	My Scanning Skill is	158	239	162	106	2.68	1.01	MP
3.	My knowledge on Photocopying Skill is	223	226	133	83	2.89	1.01	MP
B	**Internet Surfing Skills**							
4.	My skill in Opening/Browsing web sites is	321	202	86	56	3.19	0.96	MP
5.	The level of knowledge in Sending E-mail is	306	205	90	64	3.13	0.98	MP
6.	My skill in Downloading/ Saving web page is	273	214	115	63	3.05	0.98	MP
C	**Application Software / Programme**							
7.	My knowledge of Word processing/Desktop Publishing, Database programming and Spreadsheet programming is	142	236	171	116	2.61	1.01	MP
8.	My Statistical analysis/ Graphic interpretation knowledge is	97	205	173	190	2.31	1.04	LP
D	**Microsoft Office Skills**							
9.	My Microsoft Word knowledge is	209	207	130	119	2.76	1.08	MP
10.	My Microsoft Excel knowledge is	160	230	152	123	2.64	1.04	MP
11.	My Microsoft Power point knowledge is	158	212	164	131	2.60	1.05	MP
12.	My Microsoft Access knowledge is	123	203	187	152	2.45	1.04	LP
	Overall Summary					**2.76**	**0.83**	**MP**

Key:HP = Highly Proficient, MP = Moderately Proficient, LP = Low Proficient, NP = Not Proficient. Where HP = 4, MP =3, LP =2, NP =1.

The real limits of numbers:

4.0 – 3.50: Highly Proficient (HP)
3.49 – 2.50: Moderately Proficient (MP)
2.49 – 1.50: Low Proficient (LP)
1.49 – 0.05: Not Proficient (NP)

Table 2: shows frequency, the mean and standard deviation of the responses to the human resources/instructors' and trainees' competence in the utilisation of ICT in the naval training programme. The result on the table revealed that all the skills (Input/output, Internet Surfing, Application Software/Programme and Microsoft Office) were rated moderately proficient going by the mean of the clusters (2.80, 3.14, 2.46, and 2.61) respectfully. The overall result revealed a mean (2.76) rating of moderately proficient.

Table 3: Composite mean and standard deviation of the response to the extent of the use of ICT facilities by trainees and instructors (N= 665)

S/N	ICT Application	Navigation and Direction Training			Communication Training			Under Water Warfare Training			Above Water Warfare Training			Logistics Training			Engineering Training requires		
		Mean	Std Deviation	Decision	Mean	Std Deviation	Decision	Mean	Std Deviation	Decision	Mean	Std Deviation	Decision	Mean	Std Deviation	Decision	Mean	Std Deviation	Decision
1.	Word Processing	2.43	1.19	LE	2.34	1.20	LE	2.27	1.23	LE	2.21	1.23	LE	2.25	1.29	LE	2.28	1.24	LE
2.	Databases	2.27	1.14	LE	2.33	1.22	LE	2.20	1.21	LE	2.22	1.26	LE	2.22	1.27	LE	2.22	1.25	LE
3.	Spreadsheets	2.19	1.16	LE	2.25	1.21	LE	2.12	1.19	LE	2.15	1.21	LE	2.21	1.26	LE	2.21	1.23	LE
4.	Graphics	2.15	1.14	LE	2.17	1.18	LE	2.12	1.19	LE	2.07	1.17	LE	2.12	1.22	LE	2.24	1.23	LE
5.	Multimedia authoring software	2.06	1.13	NE	2.12	1.17	LE	2.08	1.20	LE	2.06	1.18	LE	2.06	1.21	LE	2.17	1.22	LE
6.	Concept mapping	2.04	1.16	NE	2.13	1.19	LE	2.14	1.21	LE	2.05	1.17	LE	2.05	1.20	LE	2.16	1.20	LE
7.	Internet/e-mail	2.42	1.24	LE	2.21	1.22	LE	2.15	1.21	LE	2.19	1.24	LE	2.17	1.24	LE	2.34	1.24	LE
8.	Simulators/micro-worlds	2.09	1.16	LE	2.19	1.22	LE	2.12	1.21	LE	2.03	1.17	LE	2.07	1.19	LE	2.17	1.21	LE
9.	Publishing software	2.03	1.10	LE	2.09	1.18	LE	2.04	1.17	LE	2.01	1.18	LE	2.05	1.17	LE	2.12	1.20	LE
10.	Geographic information (GIS) software	2.03	1.16	LE	2.08	1.19	LE	2.07	1.20	LE	2.03	1.19	LE	2.04	1.17	LE	2.13	1.20	LE
11.	Programming languages	2.03	1.16	LE	2.05	1.19	LE	2.00	1.17	LE	1.98	1.15	LE	2.13	1.24	LE			
12.	Modelling software	2.04	1.14	LE	2.08	1.16	LE	2.06	1.17	LE	1.99	1.16	LE	2.02	1.18	LE	2.10	1.20	LE
13.	Network maintenance software/devices	1.99	1.13	LE	2.14	1.22	LE	2.10	1.19	LE	2.08	1.19	LE	2.12	1.21	LE	2.24	1.25	LE
14.	Computer devices and accessories	2.12	1.18	LE	2.24	1.22	LE	2.19	1.22	LE	2.15	1.23	LE	2.18	1.23	LE	2.36	1.25	LE
	Overall	2.14	0.95	LE	2.17	1.01	LE	2.12	1.04	LE	2.09	1.03	LE	2.11	1.06	LE	2.14	0.94	LE

Real limit of Numbers

4.0 – 3.50 **Very Great Extent (VGA).**

3.49 – 2.50 **Great Extent (GE).**

2.49 – 1.50 **Low Extent (LE).**

1.49 – 0.05 **No Extent (NE)**.

Table 3: shows the mean and standard deviation of the response to the extent of the use of ICT facilities by trainees and instructors in naval training schools in the area of study. The result on the table revealed that all the items (Navigation and Direction, Communication, Under Water Warfare, Above Water Warfare, Logistics and Engineering Training) were rated low extent with mean of (2.14, 2.17, 2.12, 2.09, 2.11, and 2.20) respectively. The overall result revealed that it was equally rated as sometimes used.

Table 4: Mean and standard deviation of the perception of respondents to the benefit of utilisation of ICT in naval training schools' programme (N = 665)

S/N	Trainees' and Instructors Perception on the utilisation of ICTs in training	SA	A	D	SD	Mean Score	Std. Dev.	Decision
1	Previous knowledge of ICT facilities aids effective use of ICT gadgets in naval training programmes.	293	189	75	108	3.02	1.10	Agree
2	Utilization of ICT facilities in naval training programmes will not give a realistic presentation of naval experiences.	92	135	176	262	2.09	1.07	Disagree
3	Use of ICT cannot equip naval officers/ratings with the required skills necessary for real life naval combat.	93	107	178	287	2.01	1.07	Disagree
4	Strategies necessary for survival in naval combat can be effectively imparted using ICT facilities for training programme.	273	216	65	111	2.98	1.09	Agree
5	ICTs have the potentials of enabling trainees meet up with contemporary naval practises globally.	320	196	53	96	3.12	1.06	Agree
6	Poor educational background especially on ICT facilities deters the utilization of ICT in naval training programmes.	214	247	101	103	2.86	1.04	Agree
	Overall					2.68	0.71	

Key:*SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree.*

Real limit of Numbers

4.0 – 3.50 Strongly Agree (SA).
3.49 – 2.50 Agree (A).
2.49 – 1.50 Disagree (D).
1.49 – 0.05 Strongly Disagree (SD).

Table 4 shows the mean and standard deviation of the perception of respondents on the benefits of the utilisation of ICT in naval training schools' programme. Result revealed that the respondents agreed with items 1, 4, 5, and 6 as benefits of the utilisation of ICT in naval training schools' programme, with the mean of 3.02, 2.98, 3.12, and 2.86 respectively. However, the respondents disagreed with items 2 and 3 as the benefits of the utilisation of ICT in naval training schools' programme, with the mean 2.09 and 2.01 respectively. On the overall, the respondents agreed to the benefits of the utilisation of ICT in naval training schools' programme, with the mean of 2.68.

Figures 11 and 12 corroborate the difference in perception between trainees and instructors in this study.

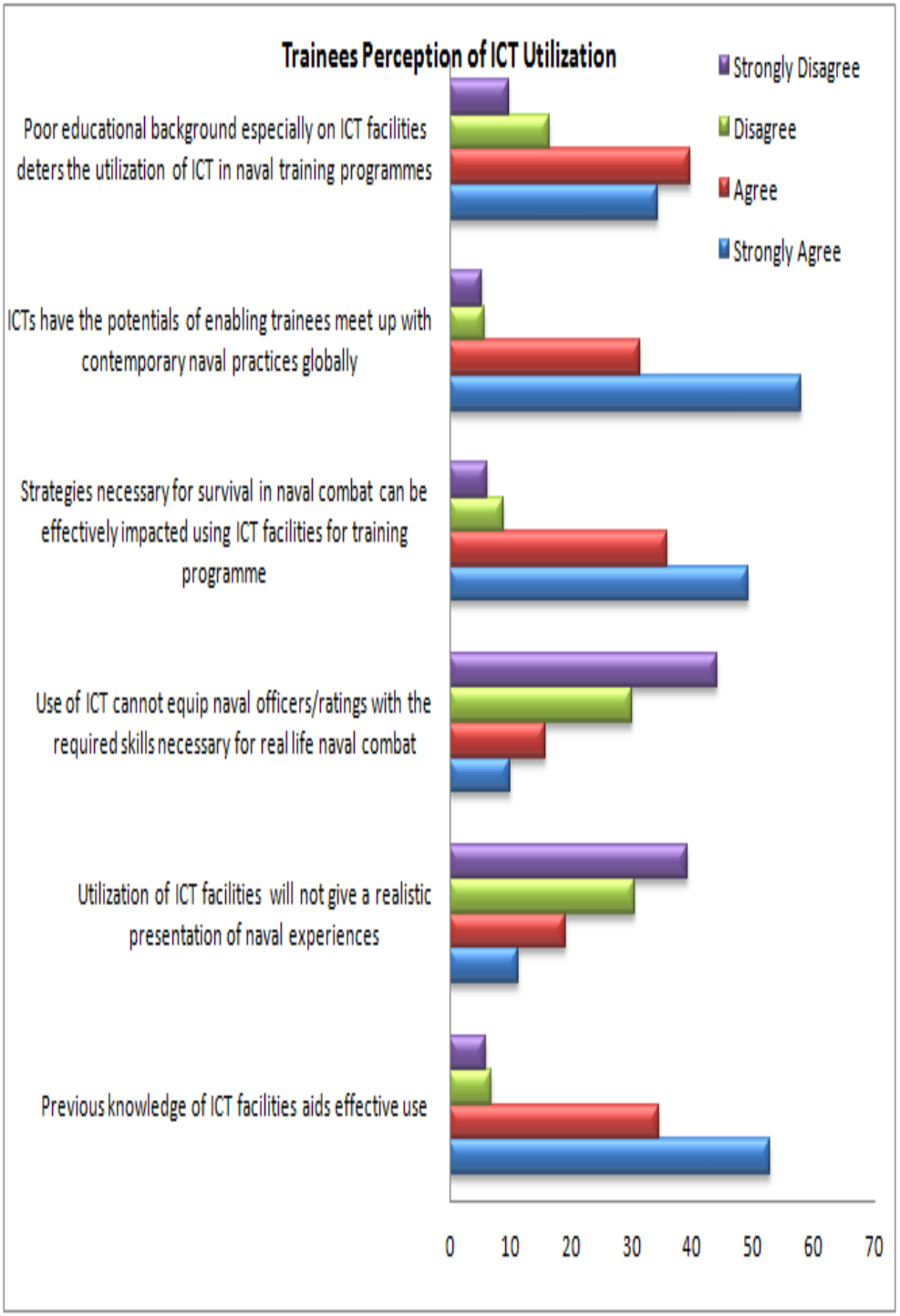

Figure 11. **Trainees' Perception of ICT Utilisation**

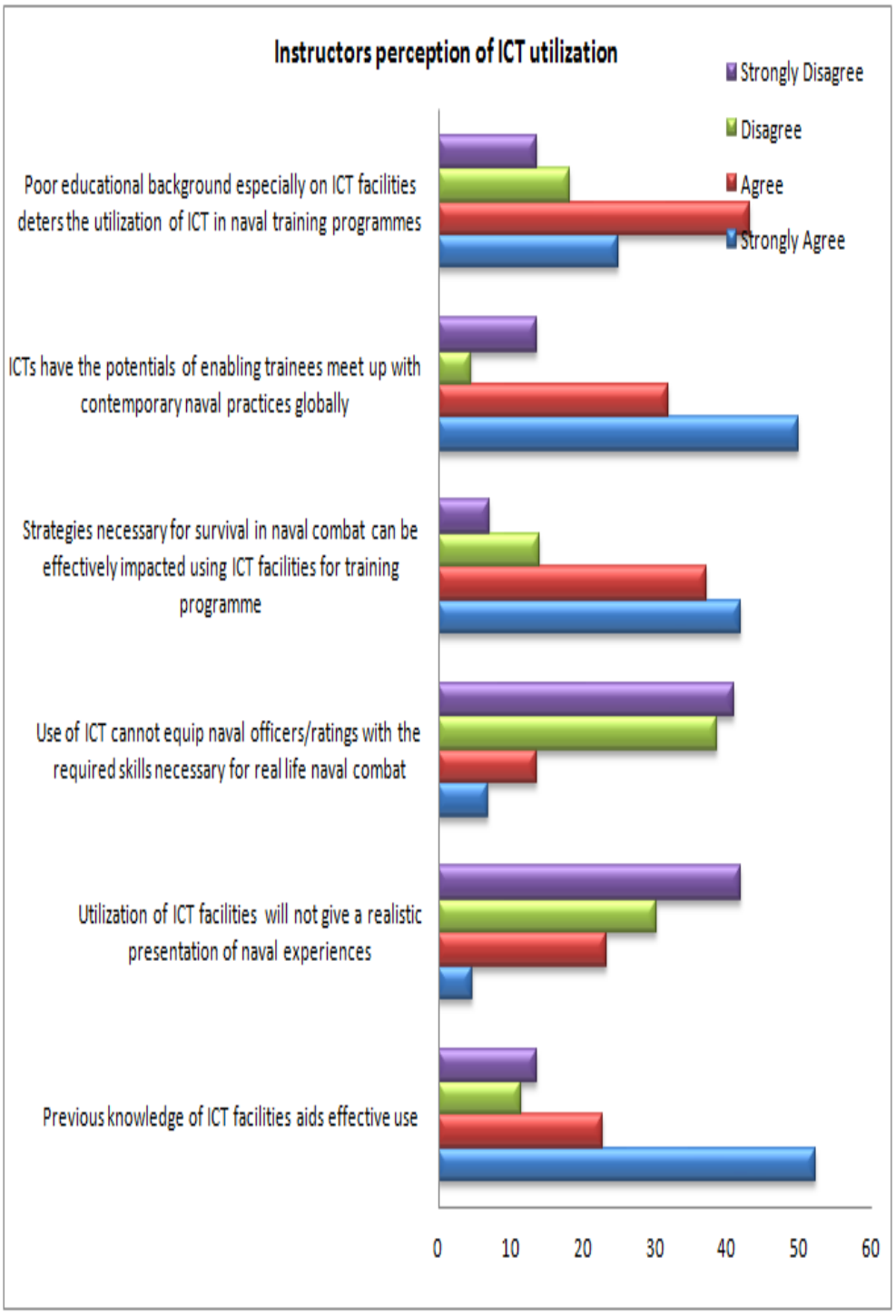

Figure 12. **Instructors' Perception of ICT Utilisation**

Table 5: Mean and standard deviation of responses to the problems/ challenges associated with the utilisation of ICT in naval training schools' programme (N = 665)

S/N	Trainees' and Instructors Challenges associated with Utilisation of ICT	SA	A	D	SD	Mean Score	Std. Dev.	Decision
1	Lack of fully equipped ICT centres in naval training schools.	279	177	90	119	2.93	1.13	Agreed
2	Lack of specific policy on ICT for naval training programmes.	201	269	92	103	2.85	1.02	Agreed
3	Competent instructors for Utilization of ICT in training programmes.	266	207	81	111	2.94	1.09	Agreed
4	Trainees' knowledge on ICT gadgets/facilities.	239	250	64	112	2.93	1.06	Agreed
5	Poor power supply.	279	214	60	112	2.99	1.09	Agreed
6	Internet Service Provider in naval training schools.	266	206	75	118	2.93	1.10	Agreed
7	Cost of possessing personal Internet facilities by the Instructors and trainees.	213	225	106	121	2.80	1.08	Agreed
8	Lack of awareness seminars/workshops on the utilization of ICT for naval training programmes.	254	219	82	110	2.93	1.08	Agreed
	Overall					**2.91**	**0.90**	**Agreed**

Key: ***SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree.***

Real limit of Numbers

4.0 – 3.50 Strongly Agree (SA).
3.49 – 2.50 Agree (A).
2.49 – 1.50 Disagree (D).
1.49 – 0.05 Strongly Disagree (SD).

Tables 5 shows mean and standard deviation of responses to the problems/challenges associated with the utilisation of ICT in naval training schools' programme. Result on the table revealed that the respondents agreed with all the items (1, 2, 3, 4, 5, 6, 7, and 8) as the problems/challenges that were associated with the utilisation of ICT in naval training schools' programme, with mean of 2.93, 2.85, 2.94, 2.93, 2.99, 2.93, 2.80, and 2.93 respectively. Similarly, the overall result indicated that the respondents agreed to the problems/challenges that were associated with the utilisation of ICT in naval training schools' programme, with a mean of 2.91.

Table 6: Mean and standard deviation of respondents to strategies that could be proffered for the utilisation of ICT in naval training schools' programme (N = 665)

S/N	Strategies	SA	A	D	SD	Mean Score	Std. Dev.	Decision
1	Proper ICT Workshops/Seminar for Naval Instructors	339	190	48	88	3.17	1.04	Agreed
2	Exposure of trainees to drills/ assignment on the utilization of ICTs facilities in naval training programmes.	298	236	46	85	3.12	1.01	Agreed
3	Periodic ICT refresher course for Naval Instructors.	298	231	50	86	3.11	1.01	Agreed
4	Provision of sufficient ICT facilities.	340	182	56	87	3.17	1.05	Agreed
5	Hand on experiences onboard naval warships.	273	251	50	91	3.06	1.02	Agreed
6	Specific policy on the infusion of ICT into the curriculum of naval training programmes.	234	281	59	91	2.99	0.99	Agreed
7	Re-orientation of Instructors on the use of ICT in training through consultancy services.	266	236	70	93	3.02	1.03	Agreed
8	Provision of stable power supply through private partnership.	279	233	56	97	3.04	1.04	Agreed
9	Provision of adequate and effective Internet service (Broad Band Width).	309	200	65	91	3.09	1.05	Agreed
10	Assist Instructors and Trainees to possess personal laptop and Internet facility through soft loan.	286	182	82	115	2.96	1.12	Agreed
	Overall					3.07	0.88	

Key:*SA = Strongly Agree, A = Agree, D = Disagree, SD = Strongly Disagree.*

Real limit of Numbers

4.0 – 3.50 **Strongly Agree (SA).**
3.49 – 2.50 **Agree (A).**
2.49 – 1.50 **Disagree (D).**
1.49 – 0.05 **Strongly Disagree (SD)**.

Table 6: shows the mean and standard deviation of respondents to strategies that could be proffered for the utilisation of ICT in naval training schools' programme. Result on the table revealed that the respondents agreed with all the items (1, 2, 3, 4, 5, 6, 7, 8, 9 and 10) as the strategies that could be proffered for the utilization of ICT in naval training schools' programme in Nigeria with mean of 3.17, 3.12, 3.11, 3.17, 3.06, 2.99, 3.02, 3.02, 3.04, 3.04 and 2.96 respectively. Similarly, the overall result revealed that the respondents agreed to strategies that could be proffered for the utilisation of ICT in naval training schools' programme with a mean of 3.07.

Discussion of Findings

The following findings were made from the data analyses of the results:

1. The ICT facilities/gadgets available in the four schools were inadequate, as the available few were the day to day routine ICT facilities that could not be adequately applied in the areas of specialisation of naval training in Nigeria. Access to necessary ICT facilities is not negotiable when considering ICT utilisation in any discipline. Aluko, (2004). posits that the issue of utilisation of ICTs will not come into play at all if these technologies are not available in the first place. Therefore, the need for the provision of ICT gadgets and software for utilisation in NN training cannot be over emphasised.

2. Both instructors and trainees were moderately proficient/competent in the utilization of ICT facilities/gadgets in NNC Onne, NNFLS Owerrinta and NNBTS Onne while instructors and trainees were highly proficient/competent in the utilisation of ICT facilities/gadgets in NNEC Sapele. Thus, there was a significant difference in the competencies of instructors and trainees of NNC, NNBTS and NNFLS on the one hand and those of NNEC. Rogers, (1999) asserts that proficiency/competencies of ICT users is of importance as superficial knowledge of technology will not do for instructors to integrate the dynamics of ICT into teaching.

3. The extent of utilization of ICT facilities by instructors and trainees was rated very great extent/great extent in NNEC Sapele while those of instructors and trainees in NNC, NNBTS and NNFLS were rated great extent/no extent. Hence, there was a significant difference in the extent of utilisation of ICT facilities by instructors and trainees of NNC, NNBTS and NNFLS on the one hand and those of NNEC. This difference stems from the fact that the NNEC trainees are polytechnic/university graduates. Thus, they are more proficient than trainees from the other schools who are mostly secondary schools certificate holders. In a study carried out by (Venkatesh, Davis and Morris 2003), the link between intention to use technology and actual usage was well established to have been linked with academic qualification.

4. On the perceptions of trainees and instructors on the utilisation of ICT facilities for naval training programmes in the four NN training schools in the area of study, both instructors and trainees agreed that ICT's have the potentials of enabling trainees to meet up with contemporary naval practices globally. Empirical study carried out by Vichita, Vathanophas, Krittayaphogphun and Klomsirir, (2008) on the utilization of ICT by naval officers in Thailand affirmed that prior experience, job relevance and commitment seem to influence their perception on the use of ICT in training which is same for the NN trainees and instructors.

5. The five major challenges associated with the utilization of ICT for naval training programmes were identified by both instructors and trainees in the four (4) NN training schools in this study. These are the lack of fully equipped ICT centres, poor power supply, specific policy on ICT use, trainees' knowledge on ICT and competency of instructors. These challenges are not peculiar to NN alone. Kaino, (2004) also identifies ineffective government policies as a major challenge to effective adoption and utilization of ICTs in developing countries. Also, Salau and Saingbe, (2008) provided evidence that erratic power supply and poor accessibility to ICT facilities are the major factors affecting the effective utilization of ICT in education and training within the Nigerian context.

6. The instructors and trainees in all the four NN training schools in the study area proffered six (6) major strategies for effective utilization of ICT in naval training programmes. These were the specific policy on the infusion of ICT into the curriculum of naval training programmes, workshop/seminar for naval instructors, exposure of trainees to drills, periodic refresher courses for instructors, provision of sufficient ICT facilities/ gadgets and provision of adequate and effective internet service (broad bandwidth). Fakeye, (2010) posits that the need for instructors competence for effective use of ICT in training cannot be over emphasised.

Conclusion

The utilization of ICT for naval training programmes occupies a central position not only in Nigeria but in modern naval training across the globe for the effective and efficient performance of naval personnel in naval operations in war and peace times, ashore and at sea. The study has contributed to knowledge in that it has expanded the synthesis of knowledge on the import of utilisation of ICT for naval training programmes in Nigeria. The results of the data analysis of this study have established the fact that three of the four schools in focus were bereft of competent ICT compliant instructors. Hence, the next to none utilization of ICT facilities/ gadgets for naval training programmes in NNC, NNBTS and NNFLS respectively and fair use of the available ICT facilities in NNEC Sapele. The need for capacity building aimed at improving the knowledge and ICT utilization skills for

Comment [AJ2]: Turn this to discussion of findings and use appropriate literature to support your findings

Comment (Abosede): Summary of Findings has been changed to Discussion of Findings. Also appropriate literature to support the findings are cited.

naval instructors is imperative for naval training programmes in Nigeria.

Generally, the study established the fact that there was dearth of ICT facilities/gadgets needed for the NNl specialization training, only everyday common ICT gadgets were available in very limited quantity in the area of study. The reason for this from the findings of the study was the lack of national policy on ICT utilization for military and by implication naval training by the NN. The need for the establishment of such policy at national and NN levels is mandatory for effectiveness in modern-day naval training.

From the perceptions both the NN instructors and trainees in the study, ICTs have the potential to aid naval personnel meet up with contemporary naval practices globally, it could be affirmed that the level of awareness of the importance and benefits derivable from the utilization of ICT in NN is high among the personnel. Thus, there would be an easy acceptance of ICT use in NN training programmes. The NN needs to take advantage of this positive perception to fully infuse ICT utilisation into its training programmes.

Also, the study identified major challenges associated with the utilisation of ICT as poor power supply and inadequate bandwidth of internet service providers. The strategies proffered to tackle these challenges included the need for the naval training schools in Nigeria to patronise Independent Power Provider (IPP) services for constant power supply and expansion of bandwidth of internet services needed for ICT use in training programmes.

The knowledge acquired from the result of the data analysis would aid the NN in formulating training policy geared towards effective the utilisation of ICT for specialised training programmes and provide ICT conducive training/learning environment in all NN training schools. This would enable NN to achieve state of the art and globally accepted naval human capacity building to meet the global contemporary challenges of navies worldwide.

Recommendations

To improve on the extent of utilization of ICT for naval training programmes in Nigeria, the study recommended the following:

1. Capacity building programmes in terms of training and re-training of NN instructors on ICT utilisation for training programmes should be made a regular feature inform of seminars, workshops and on the job training to enhance the competency of the instructors on the use of ICT.
2. The national policy on ICT should be reviewed to include the military that is not reflected in the present policy. This would enable the military, especially the NN fully embrace the utilisation of ICT for the training of its personnel to be relevant and effective in joint operations with other navies of the world and also achieve operational efficiency locally at sea and ashore.
3. The naval training schools should be adequately funded to procure ICT facilities/gadget specific to the training curriculum. It will in no doubt aid the effective utilisation of ICT for naval training programmes.
4. Since the advancement in technology permeates all sector of organisation and industry worldwide in the 21st century, the need for employees to be ICT compliant is imperative. The NN should, therefore, review its recruitment and enlistment requirement to include ICT literacy. This would aid the trainees in the ease of application of ICT facilities/gadgets in training to achieve operational efficiency at sea and ashore.

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