

## Information and Communication Technology Deployment as Psychotherapy for 21st-century Survival of Students in Bauchi Metropolis

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### Abstract

The quantitative study investigated the role of information and communication technology deployment as psychotherapy for the 21st-century survival of students in Bauchi Metropolis. The study specifically sought to find out the differences related to participants' demographic variables and mental health issues affecting their survival and the differences related to ICT-psychotherapy, mental health issues and survival skills. The descriptive survey research design was used and 120 participants responded to the ICT-Psycho Survival Questionnaire. The reliability coefficient of .851 was obtained for ICT-Psycho Survival Questionnaire. The study concluded that a statistically positive meaningful relationship exists between ICT-psychotherapy and mental health issues. Moreover, ICT-psychotherapy showed statistically negative meaningful relationship with survival skills. It was recommended that counselling psychologists should be employed to train other teachers on how to apply ICT-Psychotherapy during classroom instructions.

**Keywords:** Deployment, Information and Communication Technology, Psychotherapy, 21st-century, Survival

### Introduction

Education is a common weapon employed by nations desiring to empower its citizenry with the requisite theoretical and practical skills that will make them fit to be able to use the environmental resources for personal growth in life and the nation's progress. It is on this premises that Denga (2003) sees education as an ongoing process that focuses more on the individual's all-round development and to increase the individual productive capacity, character development, human psychological adjustment and balance, and artistic value. This portray education as a pot from which nations can feed her citizens with wisdom to enhance economic emancipation, promotion of moral decency and technological advancement.

To add more values to the type of education students receive, nations of the world are employing information and communication technology (ICT) gadgets such as multi-media instruction, projector assisted instruction and in combination with other techniques like the computer aided instruction and blended learning to improve on students' interest toward learning as well as learning outcome. The deployment of information and communication technology (ICT) has become increasingly important in the

healthcare industry, including the field of psychotherapy (Muhammad, et, al, 2020). With the rise of mental health issues, particularly among students, there is a need to explore new avenues for providing effective and accessible therapy. Bauchi Metropolis, a city in northern Nigeria, is no exception to this trend.

The city of Bauchi has a large population of students from other north-eastern states of Adamawa, Borno and Yobe who relocate to the city at the heat of the Boko Haram insurgency and may be facing a range of psychologically-related challenges. The deployment of ICT as psychotherapy seems to be necessary to complement the Bauchi State government effort towards providing solution to myriads of mental health induce learning problems. The deployment of ICT technology as therapy has been shown to be effective in improving mental health outcomes and has the potential to reach a larger number of individuals at a lower cost (Yushau, & Nannim, 2018). This is because ICT offers greater flexibility in terms of scheduling and location, which can be particularly important for most of the students in Bauchi Metropolis who are internally displaced and those with limited time and resources.

Aside the ability to use computer in typesetting, coral draw, browsing are not the only survival ICT skills required at this 21<sup>st</sup> century. Akintunde (2014) asserts that average students can help effectively utilised available information in the world of ICT. Enhancing students' survival skills to effectively utilise ICT resources is required.

Sunday (2015) asserts that students possessing requisite ICT skills have the ability to comprehensively acquire the capacities needed to survive in a globalized world. These capacities include creating, organizing, and evaluating information, making it suitable for public consumption. The implication is that, alongside these basic skills, individual abilities such as inquiry, communication, and information collection are indispensable components of survival skills. The deployment of ICT is not only framed as a response to mental health issues but also as a means to enhance survival skills.

In spite of the benefits of deploying ICT, there are still challenges associated with the utilization of ICT as psychotherapy in secondary schools in Bauchi. Therefore, this study is aim at investigating the utilization of ICT as psychotherapy for the 21st-century survival of students in Bauchi Metropolis. The study specifically examine:

1. The differences related to participants demographic variables and mental health issues affecting their survival
2. The differences related to ICT-psychotherapy, mental health issues and survival skills

### Research Questions

1. Are there differences related to participants demographic variables and mental health issues affecting their survival skills?
2. Are there differences related to ICT-psychotherapy, mental health issues and survival skills?

### Methodology

As a quantitative study, the researcher employed descriptive survey research design to determine

the students mental health and well-being, their perceptions towards ICT deployment as psychotherapy and the 21<sup>st</sup> century survival skills and the challenges of deploying ICT.

### Participants

The study recruited 120 participants who are senior secondary three students in Bauchi Metropolis. On the gender distribution of the participants with 53 (44.2%) females and 67 (55.8%) were males. The age distribution revealed that 34.2% of the respondents are within the age range of 16-18 years, 38.3% were between 19-21 years, 17.5% were between 22-24 years while the remaining 10% were between the age range of 25-26 years.

### Sampling

Purposive sampling was used to select participants who were smartphone users, and only those who willingly agreed to take part in the study were recruited.

### Instruments

The researchers used the modified Depression, Anxiety, and Stress Scale (DASS-21), the Technology Acceptance Model (TAM) questionnaire to elicit information from the respondents. Items of the original DASS-21 and Technology Acceptance Model (TAM) questionnaires were modified to a 15 structured items. The items that were not relevant and not applicable within the study environment were removed and some adjusted to suit the age and common technology used by respondents. The modified questionnaire was titled "ICT-Psycho Survival Questionnaire" in line with objectives of the study. The ICT-Psycho Survival Questionnaire was subjected to experts judgment, one Lecturer from Department of Computer Science of Abubakar Tafawa Balawa University and one from Department of Psychology, University of Jos validated the ICT-Psycho Survival Questionnaire. The test-retest and the Cronbach's alpha of the reliability was used and reliability coefficient of .851 was obtained for the ICT-Psycho Survival Questionnaire.

### Data Collection Procedure

The ICT-Psycho Survival Questionnaire was administered electronically to the participants

using social media platform. 215 copies of Depression, Anxiety, and Stress Scale (DASS-21), the Technology Acceptance Model (TAM) were administered electronically and after a period of two weeks, 180 were submitted after careful screening, 50 of the retrieved questionnaires were found to have multiple or double responses and 10 were not properly responded to while 120 were found valid and were used. The validity of the data was determined through a screening process applied to the electronically administered questionnaires. The screening process ensured the quality and accuracy of the collected data.

## Results

### Are there differences related to participants demographic variables and mental health issues affecting their survival skills?

Table 1

#### Differences between Age Groups, Mental Health, and Survival Skills

Variable		Sum of Squares	df	( $\bar{x}$ ) Square	F	Sig.
<b>Mental Issues</b>	Between Groups	158.699	3	52.900	.121	.948
	Within Groups	122037.574	118	438.984		
	Total	122196.273	120			
<b>Survival Skills</b>	Between Groups	69.612	3	23.204	.647	.585
	Within Groups	9752.156	119	35.854		
	Total	9821.768	120			

In table 1, analysis of data using one-way ANOVA indicated that there was no statistically significant difference within the age groups for mental health issues ( $F(3, 278) = .121, p = .948$ ).

There was no significant difference within age groups for survival skills ( $F(3, 272) = .585, p = .585$ ).

Table 2

#### Differences between Gender, Mental health Issues, and Survival Skills

Variable	Gender	N	( $\bar{x}$ )	SD	df	tcal	P
Mental Health Issues	Male	67	42.69	22.069	118	.998	.319
	Female	53	40.25	19.147			
Survival Skills	Male	67	29.81	5.886	118	1.385	.167
	Female	53	28.83	5.983			

In table 2, t-test results show that the mental health challenges of male and female is not statistically difference with ( $t(120) = .998, p = .319$ ). The value "120" in the expression ( $t(120) = .998, p = .319$ ) represents the degrees of freedom associated with the t-test with mean score for male ( $M = 42.69, SD = 22.069$ ) and female ( $M = 40.25, SD = 19.147$ ). As for the

survival skills data, the result also showed that there was no statistically significant mental health issues based on genders ( $t(120) = 1.385, p = .167$ ) with for male ( $M = 29.81, SD = 5.886$ ) and for female ( $M = 28.83, SD = 5.983$ ).

### Are there differences related to ICT-psychotherapy, mental health issues and survival skills?

**Correlation among ICT-psychotherapy, mental health issues, survival skills**

Variables	ICT-psychotherapy	Mental Health Issues	Survival Skills
ICT-psychotherapy	r p	0.529 <b>0.00**</b>	-0.222 <b>0.00**</b>
Mental Health Issues	r p		-0.443 <b>0.00**</b>
Survival Skills	r p		

\*\* . p<0.01

The Pearson correlation test in table 3, indicates that there was a statistically positive meaningful relationship between ICT-psychotherapy and mental health issues ( $r = 0.529$ ,  $p < 0.01$ ). However, ICT-psychotherapy showed statistically negative meaningful relationship with survival skills ( $r = -0.222$ ,  $p < 0.01$ ). There was also a statistically positive meaningful relationship between ICT-psychotherapy, mental health issues and survival skills ( $r = -0.443$ ,  $p < 0.01$ ).

### Discussion

The study revealed that there was no statistically significant difference within the age groups for mental health issues and within age groups for survival skills. The finding did not come to the researchers as surprise because previous studies have shown that people who have skills of managing their mental variables such as feelings and social interactions with others are more likely to be satisfied in their lives and to retain information and learn much more effectively. Negative emotions hinder positive interactions, generally decrease motivation and interfere (Anjum, et,al, 2022).

The t-test results show that there was no statistically significant difference between the mental health issues of males and females. It also revealed that there was no statistically significant mental health issues difference between genders. This finding corroborated the study of Sunday (2015) that ICT application in education eliminate gender barriers. Thus, from

the psychological perspective, this finding revealed that ICT-psychotherapy creates a positive mood about an expectation, a goal, and leads to creating positive learning outcome. Since it will help the students in interacting appropriately with peers and the teacher.

The study also revealed a statistically positive meaningful relationship between ICT-psychotherapy, mental health issues and survival skills. This is a revelation of the important role psycho-technological therapy can play on students mental wellbeing. Anjum, et,al (2022) backed this finding when they asserted that applying the appropriate psychotherapy can create good interpersonal relationships among students, makes one develop sensitivity and empathy and also gives a sense of satisfaction, which is an important aspect of well-being.

Additionally, incorporating ICT-psychotherapy into mental health interventions may positively impact mental health, but careful consideration is needed due to its negative association with survival skills. These implications provide valuable insights for policymakers, healthcare professionals, and educators in designing more inclusive and effective programs for societal well-being.

### Conclusion and Recommendations

The study concluded that as much information communication technology is good for educational advancement, there is need to guide students on its usage because if the students are not properly guided to improve on their survival

skills to derive the full benefits of ICT usage. Lack of psychological counselling and wrong usage has the possibility of the students deviating from the intended goals of introducing ICT. The study recommended thus:

1. Bauchi State government should provide schools with ICT- gadgets to be used and adequate psychological counselling to guide the students.
2. Counselling Psychologists should be employed to train other teachers on how to apply ICT-Psychotherapy during classroom instructions
3. Adequate attention and counselling should be given as well as provided to enhance student's survival skills.

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