

**TITLE INDEX TO WATARI JOURNAL OF SCIENCE AND TECHNOLOGY
EDUCATION FROM 2013 TO 2016**

A

- Agricultural Science Education in resolving security and environmental Problems in Nigeria by Arma Yau H. 2014, Vol2 (1) pp. 1-5
- Applicability of practical method for finding the meaning of p1 (h) and area of
Circle at Junior Secondary School Level by Terhemba A.C 2013, pp 24-34.
- Approaches to resolving Environmental Challenges in Nigeria by Aminu A.W 2014, Vol2 (1) pp46-53.
- Assessment of facilities and materials for Teaching practical woodwork
Technology at NCE level for contemporary Technology Teacher Education: A study of Federal College of Education (Technical) Gusau, Zamfara state. By Shitu Bello Kurya. 2015, Vol3(1) pp.54-62

B

- Benefits and Challenges of integrating Information and Communication
Technology (ICT) into Teaching and Learning Technical and Vocational Education in Nigeria by Umar Lawal. 2016, Vol.4(1) pp.176-183.
- Building Science Educators capacity: the constraints of institutional policy and
Resource factors in Colleges of Education by Aminu AbdulRahman Bichi. 2015, Vol. 3(1) pp.63-77

C

- Chemistry Education as effective tool for resolving environmental challenges in
Nigeria by Ekevwe, A.E. 2014, Vol2(1) pp.38-45
- Cross platform online gaming as a service: a cloud computing by Bello Ibrahim
Kangiwa 2014 Vol.2(1) pp.148-156

D

- Determining critical factors affecting Teachers use of Information
Communication Technology (ICT) in Teaching-learning process by
Badariyya Sani Illiyasu. 2015, Vol.3(1) pp.30-42.
- Developing a quality science, Technology, Engineering and Mathematics

(STEM) Teachers Education Programme that integrates indigenous knowledge based systems. By Dogara, M.M 2014, Vol.2 (1) pp. 6-19.

Developing Hydro-electric power plants for the resolution of environmental and Security related problems in Nigeria by Sunusi, M.I 2014, Vol. 2 (1) pp.125-133.

Developing indigenous instructional strategy for effective Electrical/Electronic Technology Education: an overview of Hydroelectric power generation by Isyaku, S. M. 2013, pp. 101-110.

Developing indigenous Instructional Strategies for effective Science Education by Ekevwé, A.E. 2014, Vol,2 (1) pp. 135-139

Developing indigenous Instructional Strategies for effective Science, Technology and Mathematics Education by A.S. Okegbile. 2013, pp. 1-6

Developing Indigenous Strategies for effective teaching of family planning in Biology Education by Abubakar A. I. 2013, pp.44-52

Developing quality Science, Technology, Engineering and Mathematics (STEM) Teacher Education Programme that integrates indigenous Knowledge by Dogara, M.M 2013, pp.7-14

Developing Simple (Indigenous) Instructional materials for effective Agricultural extension teaching by Bello I. B. 2013, pp.71-78

E

Educational Statistics as a tool for resolving security problems in school and Colleges in Nigeria by Ali, A. A. 2014, Vol2(1) pp.77-81.

Effective Teaching of Practical Biology courses at NCE Level as away forward in Solving environmental and security problems in Nigeria by Ali, B and Haruna M. 2014, Vol.2(1) pp.62-69

Effect of different levels of phosphate application on growth of some cowpea

Variety (vigna unguiculate L. Walp) in Minjibir, Kano State Nigeria by Muhammad U and Lawal M. 2013, pp. 15-23

Effect of Jakin Birni Instructional Method on the academic performance of Primary four nomadic students in simple equations by Muhammad. D. 2013, pp.156-163

Effect of three teaching Techniques on academic achievement interest and Retention in radio and Television trade among students of Technical Colleges in Kogi State by Omoiya M. Ariyo (PhD). 2016 Vol.4 (1)pp. 74-86

Enhancing the Teaching and Learning of Physics concepts for sustainable Development in Nigeria by Waperi A. Kaigama 2016, Vol.4 (1) pp. 160-168.

Evaluating the performance of material images in a water marking application

by Shehu, A.2014, Vol.2(1) pp. 82-90

F

Fostering the understanding of scientific concepts using indigenous Instructional Strategies by Mrs. Musilimotu T. Hassan 2016, Vol.4 (1) pp. 142-148.

G

Gender and self concept as a factor influencing academic achievement of Adult

Learners in Mathematics among post literacy learners by Muhammad Mahdi Abdullahi. 2014, Vol.2 (1) pp. 140-147.

Growth and yield performance of seven improved varieties and one local variety

Of maize in Bichi Local Government Area, Kano State by Abdullahi Ismail Harbau. 2015, Vol.3 (1) pp. 100-111.

I

ICT as an innovational catalyst for Teaching Metal work Technology by Abubakar Ibrahim Muhammad. 2016, Vol.4 (1) pp. 149-159

ICT Innovational skills and Teacher's competitiveness in Teaching basic Technology in secondary schools in Kano State, Nigeria by Adamu Yusuf Sawaba 2016, Vol. 4 (1) pp.45-53

The impact of indigenous Instructional strategy in Teaching Mathematics in

- Secondary School by Abdullahi, H. L. 2013, pp.129-137
- Improving practical physics components for trainee Teachers in Colleges of Education in Nigeria by Olabimtan, Samuel Olugbenga. 2016, Vol. 4 (1) pp.105-117
- Improving the status of Agricultural Science Education Teachers in Kebbi State
As a tool for Enhancing Security by Ahmad T. 2014, Vol.2 (1) pp.28-37
- Incorporating indigenous knowledge and instructional strategies to enhance The teaching of Biology concepts at secondary schools level in Kano Nigeria by Mamudu, S. T. 2013, pp. 32-43
- Influence of Gender Stereotyping on academic achievement among Biology Students in Anambra State by Achufusi, J.N (PhD) and Ezenduka, C.U (PhD). 2016, Vol.4 (1) pp. 34-44
- Innovations, successes and challenges in science Technology and mathematics
(STM) Teaching and Teacher Education in Nigeria by Sabiu Dahiru Yusuf. Vol.4 (1) pp.16-33
- Innovations, successes and challenges in Science, Technology and Mathematics Teaching and Teacher Education in Nigeria by Dr.S.S. Bichi. 2016, Vol.4 (1) pp.1-15
- Innovation strategies for effective Teaching of Secondary School Biology by Lauratu Adamu Kurawa. 2016, Vol.4 (1) pp.98-104
- Integrated approach as an effective strategy for the teaching of basic Technology Education in junior Secondary Schools in Nigeria by Ali M. J. 2013, pp. 20-27
- Investigation of response of Amaranths (*Amaranthus Hybridus*) varieties to Different rates of coconut milk foliar application by Halliru Sanusi. 2016, Vol.4 (1) pp.54-67
- In-vitro propagation of Tomatoes under Aseptic condition by Muhammad U. and Adamu A. 2013, pp.53-63
- Irrigation farming as an effective tool for resolving security and Environmental and problems in Nigeria by Bashir, A.Y 2014, Vol.2 (1) pp.111-116

M

Mathematics as story telling (MAST): An instructional approach for indigenous

Cultural setting by Madu, C. I. 2013, pp.121-128

Mathematics Education in resolving security and environmental problems by

Pindar, Y.K and Zanna, F. A. 2013, pp.138-143

Metal work Technology: An effective tool for resolving security challenges in Nigeria by Ajibuwa, J.A 2014, Vol.2 (1) pp.98-104

P

Peer tutoring: An effective Indigenous strategy for Teaching and Learning

Chemistry in College of education in Nigeria by Alaebo, H.O 2013, pp.111-120

Physics Education as a tool for resolving security and environmental problems

in Nigeria by Mallam Ahmed A. Uwaisu. 2014, Vol.2 (1) pp. 91-92

Practical approach in the TEACHING OF Physics component of the Basic

Science Course: Panacea for motivating Students interest in Physic. By Umoren Friday Alphonsus. 2016, Vol.4 (1) pp.118-129

Production of quality automobile technology Teachers through effective

Teaching Practice exercise by Isah Mohammed Patizhiko. 2015, Vol.3 (1) pp.86-91

R

The Relevance and application of some mathematical concepts: Implications for

Mathematical Instructional by Salihu Adamu Ibrahim and Sunusi Haruna. 2015, Vol.3 (1) pp. 112-120

Repositioning Technical and Vocational Education (TVE) for National

Development by Baffa Garba Indabo. 2016, Vol. 4 (1) pp.169-175

Research Contemporary Science, Technology and Mathematics (STM) Teaching

and Teacher Education in Nigeria by AbdulAzeez Abubakar. 2015, Vol.3 (1) pp.1-9

Research in contemporary science Technology and Mathematics (STM)

Teaching and Teacher Education in Nigeria by Steve Arogbonlo. 2015, Vol.3(1) pp.10-16

Research in Nigeria: Challenges and the way towards National Development by

Rabiu Nasidi. 2015, Vol.3 (1) pp.17-23

Resolving security and Environmental problems of Nigeria through science

Technology and Mathematics Education by Abubakar, M. 2013, pp.144-149

The Role of Mathematics Teachers in resolving security and environmental Problems in Nigeria by S. Abubakar 2014, Vol.2 (1) pp.45-61

S

Science Technology, Engineering and Mathematics Education (STEM) as an Effective tool for resolving security and environmental problems in Nigeria. By Umar, S.G 2014, Vol.2 (1) pp. 105-110

Skill acquisition through technical education: An antidote to crime in the Society by Yahaya Ibn Salihu. 2015, Vol.3 (1) pp. 92-99

The Status of civil servants towards recreational participation in Jigawa State

By Ibrahim Sule. 2015, Vol.3 (1) pp.24-29

Students Utilization of the Immediate Environment on Teaching and Learning

Of Biology by Rabiu Adamu and Hassan Rabiu D. 2015, Vol.3 (1) pp.121-129

A Survey of Gender differences in Primary school pupils performance in basic

Science by Jibril Fuad Abba. 2016, Vol. 4(1) pp.68-78

Sustaining Technical and Vocational Education and Training (TVET) as

Fundamentals for sustainable National Development in Nigeria by Bashir Sabo Abubakar. 2016, Vol.4 (1) pp.130-141

A Systematic approach to resolving the security challenges in Nigeria schools

By Abdulkadir, A.S 2014, Vol.2 (1) pp. 70-76

T

Teaching Basic Science concepts through indigenous practices, clues to the Incorporation of some Hausa Cultural Practices by Peni, Y. H. 2013, pp.85-91

Teaching Science to students learning English as a Second Language (ESL): the

Role of Science Teaching by Ameen Akeem and AbdulRauf A. Hawau. 2016 Vol.4 (1) pp. 87-97

Trace element of concentration of commercially available drinking water in Kano State by Umoh, G.I. 2013, pp. 150-155

U

Use of diagrammatical strategy for Teaching Elementary Science by Edet, C.A

2013, pp. 79-84

The Use of Indigenous approach as a panacea for enhancing the Teaching and

Learning of Biology in Secondary Schools by Ahmed A. W. 2013, pp.64-70

The Use of Shelterbelts in preserving lives of Animals, Plants and Solving Environmental Problems by Abubakar A. I. 2014, Vol.2 (1) pp.117-124

Using computer (AUTOCAD) in Teaching and Learning Building Drawing in Tertiary Institution in Nigeria. By Saleh Isa Muhammad Abubakar and Hamman Saleh. 2015, Vol. 3 (1) pp. 78-85

Use of diagrammatic strategy for teaching element science by Edet, C.A. 2013, pp.79-84

The Use of indigenous approach as a panacea for enhancing the teaching and

Learning of Biology in secondary schools by Ahmed, A. W. 2013, pp. 64-70

The Use of shelterbelts in preserving lives of Animals, Plants and solving Environmental problems by Abubakar A.I 2014, Vol.2 (1) pp.117-124

**SUBJECT INDEX TO WATARI JOURNAL OF SCIENCE AND TECHNOLOGY
EDUCATION FROM 2013 TO 2016**

2013 SUBJECT INDEX

B

- Basic science -85
 - Teaching - 85
- Basic technology education - 92
 - Approaches to teaching 93 - 97
 - Defined - 92
- Biology - 39
 - Concepts in – 39 - 40
 - Teaching – 40 – 41

C

- Chemistry -111
 - Culture in class room – 117
 - Peer tutoring – 112
 - Guidelines – 113 - 115
 - Historical background – 113
- Cowpea – 15
 - Application of phosphate 15 – 16

E

- Ex-plants – 53

F

- Family planning – 44
 - Teaching of – 47 – 48
 - Traditional – 44 – 45

H

- Hydroelectric power system – 107

I

- Indigenous knowledge – 129

- Based systems - 9 – 11
 - Relevance in STM education – 130
- Indigenous science – 33
 - Model for teaching – 34 -35
 - Objective – 34
 - Resources and concept formation – 36 – 38
- Instructional method see Jakin Birni

J

- Jakin Birni – 156

M

- MAST – 122 – 127
 - Advantages – 125
 - Defined – 122 - 123
 - Steps analysis – 127
- Mathematics – 23
 - Defined – 156
- Mathematics Education – 138
 - And security – 140
 - Environment – 139

P

- Phosphate – 15
- Psychological theories - 2

S

- Science Education – 85
- STEM Education
 - Defined – 7
 - Evaluation in Nigeria – 9
 - Implementation strategies - 8
 - Purpose – 7 – 8
 - Status – 7 - 8
 - Weakness – 11 – 12
- STME – 145
 - Environmental problems in Nigeria - 145

Security challenges in Nigeria – 147 – 148

T

Tomatoes – 53

Traditional family planning

Advantages - 49

Disadvantages - 49

Teaching of– 47 – 49

2014 VOL.2(1)SUBJECT INDEX

A

Agricultural science – 28

Climate change -30

Education – 28 - 29

Teacher production - 32

Attitudinal changes - 47

Concept -47

B

Biology - 62

Defined – 62

Objective of teaching – 64 - 66

C

Chemistry - 38

Education - 1

Defined - 43

Cloud computing - 148

Defined – 148

Cross flat form – 149

Defined – 150

E

Educational statistics – 77

Concept – 77 – 78

Importance – 78

Place in security – 78

Electrical/ Electronic technology – 102

Defined – 102
Environment
Abuse - 94
Challenges – 94
Concept – 93
Environmental challenges – 46
Factors threatening – 47
Environmental issues – 39
Effects – 40 – 41

G

Global warming - 48
Defined – 47
How to stop – 48 – 50

H

Human security – 22
Concept – 22
Problems – 22 – 23
Hydro- Electric power – 125

I

Integrated science - 20

Indigenous knowledge - 11- 13
Based systems – 11 – 13
Meaning - 11
Nature – 12
Status – 13
Indigenous instructional strategies -
Historical perspective - 135
Meaning - 135
Types -136
Ways of developing – 136 - 137
Irrigation farming -111
Benefits – 114

M

Mathematics

Importance - 140

Teachers – 54

Defined – 56

Importance – 54 – 55

Roles of - 57

Metal work technology

Career - 100

Impact in society - 99

N

Nigeria - 100

Causes of insecurity in - 101

P

Physics education – 92

Objective – 92

Role of – 57

To solve environmental problem – 95

S

Security 2,71-74

And environmental challenges 2 - 4

Defined – 71 – 74

Importance of school – 73

In school – 72

Shelter belts

Concepts – 119

Functions -118 – 119

Roles of – 120

STEM Education

Defined -7

Nature – 9

Purpose - 8

Status – 9

Towards quality – 14

Weakness - 13

V

Vocational Agricultural Education

Enhancing - 5

Objectives – 4

Problems – 5

Roles of – 4

2015 VOL.3(1) SUBJECT INDEX

A

Auto – cad – 79 – 82

Benefit – 80 – 81

Challenges – 82

Described – 79

Automobile technology - 86

Concept teaching – 88

Skills to be acquired – 87

B

As a discipline – 123

Defined – 121

C

Collection development

And the objective of vision 20: 2020

Challenges – 159

Defines – 151, 155

Policy – 156

Process – 155

Civil servants – 24

In jigawa state – 25

Recreational attitude – 26 – 27

G

Global warming – 51

I

Improvisation – 171 – 172

Using prism – 173

Instructional strategy – 178
 Concept formation – 178
Information communication technology – 30
 Importance – 32

L

Libraries – 151
 Roles in achieving the objectives of vision 20: 2020 = 152 – 153

M

Maize – 100
 Botanical description – 101
 Described -100
 Origin -101
 Pest and disease of – 104
 Varieties – 102
Mathematics education
 Concepts and their application – 114
 Objective – 113

Metal work Technology
 In NCCE minimum standard – 164
 Place in technical education – 165 – 166
 Reviewing course outline – 163
 Review of curriculum – 167

R

Research
 Challenges facing – 19
 Defined – 18
 Samples of STM – 3 – 5
 Types / purpose – 1 - 2

S

Science Education – 63
 Capacity building – 65 – 67
Software – 132

Defined –132 – 133
Development – 133 – 136
 Challenges –1 36
STEM – 13

T

Technical Education – 93
 Aims and objectives – 188
 Skills acquisition in – 93
 Constraints – 96
 Role of government – 95

V

Vocational and Technical Education
 Development – 144 – 145
 Emerging problems – 145 – 147

W

Water pollution
 Categories – 44
 Description – 43 – 44
 Measurement – 50
 Sources of – 45 – 46

2016,vol. 4(1) SUBJECT INDEX

A

Acid and base - p. 146
Amaranths – p.54-57
 Described- 54
 Ecological requirements -57
 Importance-56
 Origin- 56

B

Biology – 98-102
 Defined -98
 Effective teaching of -100-102

C

Curriculum Development- 21
Concept mapping -25-26
 Advantages-26
Coconut-57-59
 Preparation and application- 59
COCOSS nucifera see coconut

D

Density-145

E

Elasticity -144

F

Fermentation-145
Friction-124-127
 Concept-124-125
 Demerit of-126
 Merit of – 126
 Reducing-127

I

ICT-150-151
 Defined 150-151
 Skills for Teaching Teachers-47
Innovation- 19,106
 Concept in Teaching -99
 Defined, 19,106
 Features- 20-21,108
 Types -107
Instructional materials-27

M

Mathematics- 18
 Defined-18
Metal work technology- 149
 Challenges -156-157
 Position of ICT in teaching- 153

Motion-144

N

National Development- 133

Concept-133

P

Physics- 105

Concepts in-161

Constraints in- 163

Curriculum content- 165-166

Decribed-118

Education-109

Teacher's quality-111-112

Why students lose interest-120

R

Radio and Television- 74-82

S

Science

Barriers to teaching-90-92

Defined- 17, 34, 89

Importance-90

Influence of culture- 143

STM- 4, 23, 30

Challenges in Innovation-30

Challenges in Teaching of -6-7

Effective Teaching of -23

Gate ways to knowledge economy-4

Innovation in Teaching of – 7-8

Successes in Teaching of-10

T

Teacher Education-19

Challenges of STM and-12-13

In Nigeria-11-12

Teaching

Circle-24

- Defined-19
- Methods-22
- Technical and Vocational Education
 - Benefits of ICT in -179
 - Challenges and prospects-174
 - E- Learning in- 178
- Technical and Vocational Education and Training see TVET
- Technical Education-171
 - Concept-171
 - Defined-151
 - Roles of Teachers in -172
- Technology
 - And science compared-3-4
 - Concept Illustrated-3
 - Defined-2, 18
- TVET
 - Curriculum-138
 - Programme in other countries-133-136
 - Sustainable development-131-132

V

- Vocational Education-171
 - Concept-177-172