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**EDUCATION TECHNOLOGY**

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**EDUCATION TECHNOLOGY**

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# **THE 2ND INTERNATIONAL SEMINAR ON EDUCATIONAL TECHNOLOGY 2016**

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## **Conservation Education in the Era of Innovation and Technology**

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## Table of Contents

Foreword.....	iii
Welcome from the Rector of Semarang State University.....	iv
Welcome from the Director of the Postgraduate Program.....	v
Welcome from the Chair of Organizing Committee.....	vi
Invited Speakers.....	vii
Table of Contents.....	xii
Facilitating Students’ Autonomous Learning through the Use of Videotaped Project: A Classroom Practice in ESP Course.....	19
Ni Putu Era Marsakawati.....	19
Implementing Values in Writing Class.....	22
Devina Christine Wijaya <sup>a)</sup> and Emilia Ninik Aйдawati <sup>b)</sup> .....	22
Evaluating Writing and Literacy Using Extended Writing Project (EWP).....	27
Rani.....	27
Language Laboratory Development and Listening Instruction: A Literature Review.....	33
Refi Ranto Rozak <sup>1, 2</sup> .....	33
Teaching and Assessing Writing in A Literacy Based Program through Peer Review.....	39
Emilia Ninik Aйдawati.....	39
Lecturers’ and Students’ Perceptions on Motivational Teaching Strategies Applied in the English Department of Semarang State University.....	44
Arif Widagdo.....	44
Technology-based learning in the classroom.....	53
Ahmad Sofwan.....	53
Computer-Mediated Corrective Feedback on Writing: Principles and Practices.....	56
Iis Sujarwati.....	56
<i>Gambang Semarang</i> : The Spirituality of Simple Accustomed Belief in Seemingly Far-fetched Culture.....	62
Nadya Natalia & Angelika Riyandari.....	62
Development of Technopreneurship Learning Model In Vocational High School Machinery Program.....	68
Edy Ismail <sup>1)</sup> , Samsudi <sup>2)</sup> , Dwi Widjanarko <sup>3)</sup> .....	68
Enhancing Student’s Problem Solving Ability: A Qualitative Study of Brain-Based Learning Implementation in Mathematics Classroom.....	77

Taulia Damayanti <sup>a)</sup> and Masrukan <sup>b)</sup> .....	77
The ICT Development for the Young Learners as Media Education .....	85
Muammad Nafi Annury .....	85
Differences in the Concept of Authentic Assessment and Authentic Assessment on the <i>Kurikulum 2013</i> .....	93
Sari Yustiana.....	93
The Use of Computer Media on Dysgraphia Children in Learning Writing.....	96
Oktarina Puspita Wardani <sup>a)</sup> and Meilan Arsanti <sup>b)</sup> .....	96
Reasoning Ability Students in Mathematics Problems Solving Viewed from Cognitive Style .....	99
Mochamad Abdul Basir, Hevy Risqi Maharani .....	99
The Development of Multimedia Interactive Science Learning Material at Students 5 <sup>th</sup> .....	103
Jupriyanto .....	103
The Role of Islamic Culture of Academic Achievement Students in Mathematics Education Program .....	107
Mohamad Aminudin .....	107
Structural Study by A.J. Greimas The People's Princess Stories Kumala .....	111
Evi Chamalah.....	111
Improving Religious Character and Achievement Based Learning Through Islamic Culture of Social Science Subject Class V SDN 02 Temulus.....	115
Yulina Ismiyanti.....	115
Science and Character in The Form of Children's Literature .....	120
Erna Noviyanti.....	120
Cooperative Learning Type Group Investigation with Scientific Approach to Improve Problem Solving Ability In Elementary School .....	124
Nuhyal Ulia.....	124
Surrealism Text Drama Indonesia in Kapai Kapai .....	129
Turahmat.....	129
Side-Effects of Technology for Children's Development .....	135
Andarini Permata C.....	135
Utilization CD Learning to Improve Communication Skills Through Student Learning Mathematical Osborn.....	140
Nila Ubaidah.....	140

The Application of Role Play Method with Islamic Cultural Values in Civic Education Learning for the Fourth Grade Students at Karang Asem 01 Elementary School .....	146
Muhamad Afandi <sup>1 a)</sup> and Sri Wahyuningsih <sup>2 b)</sup> .....	146
Natural Science Concept Learning Through SETS Model for Developing Science Literacy .....	152
Arrofa Acesta .....	152
Strengthening Strategies Language Learning and Insightful Indonesian Literature Budai Assisted Android .....	157
Leli Nisfi Setiana <sup>a)</sup> and Aida Azizah <sup>b)</sup> .....	157
Problematika Penggunaan Estetika Bahasa Pada Model Publikasi Wacana Iklan Politik Pilkada .....	160
Fahrudin Eko Hardiyanto .....	160
Improvement Students PGSD of Scientific Attitude Through Applying Model in Learning Inquiry Laboratory.....	163
Mahmud Alpusari <sup>1 a)</sup> and Riki Apriyandi Putra <sup>2 b)</sup> .....	163
Improving Education Services for Supporting National Education Index Improvement:Perspective Leadership and Entrepreneurship .....	169
Rida Fironika Kusumadewi.....	169
Improving Learning Participation of the Students of PGSD UMP on Civics Education Using Value Clarification Technique Through Charity .....	174
Aji Heru Muslim .....	174
Building Student's Character Through Students Development Manajement Based on Islamic Academic Culture .....	183
Nuridin .....	183
The Role of Mathematical Representation and Disposition in Improving Students' Mathematical Power .....	190
Imam Kusmaryono <sup>1</sup> , Hardi Suyitno <sup>2</sup> and Dwijanto <sup>3</sup> .....	190
Development of Instructional Materials Comic Science To Increase Achievement Student in grade IV Elementary School .....	199
Yunita Sari .....	199
Material Selection Overlay Road To Climate Change Resilient .....	204
Abdul Rohman <sup>1,a)</sup> .....	204
Influential Correlation Factor Of The Iva Test Result Towards The Woman Prisoners Of Ii A Class In Semarang .....	208
Agustin Rahmawati <sup>1,a)</sup> , and Lia Mulyanti <sup>2,b)</sup> .....	208

Control of Lipid Profile on Diabetes Mellitus Animal Models With Watercress and Black Rice Bran ..	213
Agustin Syamsianah <sup>1,a)</sup> , Herlisa Anggraini <sup>2,b)</sup> .....	213
The function of Extract Curcuma (Curcuma xanthorrhiza Roxb) In Restoring Hemoglobin, erythrocyte and hematocrit On Soccer Athlete .....	219
Ali Rosidi <sup>1,a)</sup> .....	219
Rice Leaf Extract for Kidney Damage Prevention in Plumbum-Exposed Rats .....	226
Budi Santosa <sup>1</sup> , Henna Ria Sunoko <sup>2</sup> , Andri Sukeksi <sup>3</sup> .....	226
Introducing Indonesian Traditional Dance To Teach Indonesian Language For Foreign Speakers (Bipa) In Thailand.....	231
Dian Candra Prasetyanti <sup>1,a)</sup> .....	231
Effect of Fiber Volume Fraction Of Tensile Strength and Impact Strength biocomposite of Bacterial cellulose-Shellac.....	234
Dini Cahyandari <sup>1)</sup> .....	234
Developing English for Nursing Materials Integrated With Task-Based Language Teaching (TBLT) and Soft-Skills.....	240
Dodi Mulyadi <sup>1,a)</sup> , Dian Candra Prasetyanti <sup>2,b)</sup> .....	240
The Effectiveness Of Cooperative Learning Type Team Assisted Individualization Based On Constructivism Toward Ability To Think Mathematically Creative Of Student.....	244
Dwi Sulistyaningsih <sup>1,a)</sup> , Venissa Dian Mawarsari <sup>2)</sup> .....	244
Support from Family , Health Worker and Elderly Hypertension Health Care Access In Controlling health .....	249
Edy Susanto <sup>1,a)</sup> .....	249
Implementation Of Learning Model "Local Tourism" Based Potential Of District Rembang .....	253
Eny Winaryati <sup>1,a)</sup> , Akhmad Fathurohman <sup>2,b)</sup> , Setia Iriyanto <sup>3,c)</sup> , Sri Haryani <sup>4)</sup> .....	253
The Description of II Class Women Prisoners' Cervix in Semarang .....	258
Erna Kusumawati <sup>1,a)</sup> , Novita Nining Anggraini <sup>2,b)</sup> .....	258
The Pursuance And Implementation Of Informed Consent Law Towards Vaccination Service Based On 1464/Menkes/Per/X/2010 About Permission And Implementation Of Midwife Practice In Self-Proclaimed Midwives In Semarang.....	262
Fitriani Nur Damayanti <sup>1,a)</sup> , Siti Nurjanah <sup>2,b)</sup> , Dewi Puspitaningrum <sup>3,c)</sup> .....	262
The Effect of Giving Rice Bran to Blood Glucose at Mice which Given Alloxan.....	266
Hapsari Sulistya Kusuma <sup>1,a)</sup> , JB Suparyatmo <sup>2)</sup> , Bambang Suprpto <sup>3)</sup> .....	266
The Risk Factors occurrence of contact dermatitis: a cross sectional study .....	271

Cynthia ayuningtias <sup>1,a)</sup> , Eko Krisnarto <sup>2,b)</sup> , Kanti Ratnaningrum <sup>3,c)</sup> .....	271
Enhancing Student Character Based on Conservation Values (Case Study at Semarang State University) .....	275
Masrukhi <sup>1,a)</sup> .....	275
Surface Degradation Analysis of Vacuum Composite Epoxy Resin Insulation Material Using Coastal Sand and Filler Containing Much Calcium .....	279
Moh Toni Prasetyo <sup>1,a)</sup> .....	279
Human Development Index .....	286
Moh. Yamin Darsyah <sup>1,a)</sup> , Rochdi Wasono <sup>2</sup> .....	286
The Influence Of Learning Method And Gender On The Learning Outcomes Of Students At 'Aisyiyah Bustanul Athfal Kindergarten In Semarang City .....	290
Mufnaetty <sup>1,a)</sup> .....	290
Fostering Intrinsic Motivation through Self Assessment; an Alternative in Improving Learning Quality .....	293
Muhimatul Ifadah, <sup>1,a)</sup> Siti Aimah, <sup>2,b)</sup> .....	293
The effect of cyanoacrylate infiltration on microstructure of hydroxyapatite/chitosan composite....	296
Purnomo <sup>1,a)</sup> , Endang Tri Wahyuni Maharani <sup>2)b)</sup> .....	296
Serum Transferrin Receptors of Iron Deficiency Anemic Rats That Feeding Tempe Fortification Combination Iron and Vitamin A .....	300
Rahayu Astuti <sup>1,a)</sup> , Hertanto Wahyu Subagyo <sup>2,b)</sup> , Siti Fatimah Muis <sup>3</sup> , Budi Widianarko <sup>4)</sup> .....	300
The Implementation of Peer Assessment and Students' Responses in <i>Language Teaching Method</i> Class .....	306
Riana Eka Budiastuti <sup>1,a)</sup> , Muhimatul Ifadah <sup>2,b)</sup> , Siti Aimah <sup>3,c)</sup> .....	306
Molecular Surveillance of Pyrethroid Resistance of Dengue Vector [ <i>Aedes aegypti</i> ] and its Implication To Public Health .....	309
Sayono <sup>1,a)</sup> , Ulfa Nurullita <sup>2,b)</sup> , Irfanul Chakim <sup>3,c)</sup> .....	309
Effective Use of Lesson Plan to Trigger Students' Autonomy.....	315
Siti Aimah <sup>1,a)</sup> Muhimatul Ifadah <sup>2,b)</sup> Dwi Anggani Linggar Bharati <sup>3,c)</sup> .....	315
Performance Description Of Counselor Family Planning In The Implementation Family Planning Program In Demak District.....	319
Siti Istiana <sup>1)</sup> Siti Nurjanah <sup>2)</sup> .....	319
Characterization of Hydroxyapatite Material from Bovine for Making 3D Printer Filament Method Fused Deposition Modelling for Implants Scaffolds Mandibular Reconstruction .....	324

Solechan <sup>1, a)</sup> , Saifudin Ali Anwar <sup>2</sup> .....	324
Molecular Characterization And Hemagglutination Activities of Flagellin Protein of <i>Salmonella typhi</i> .....	330
Sri Darmawati <sup>1, a)</sup> , Budi Santosa <sup>2</sup> , Muhammad Evy Prastiyanto <sup>3</sup> , Ragil Saptaningtyas <sup>4</sup> .....	330
Counter-Pressure Practice Method by Spuse's for Reducing Pain of Mother's In First Stage Labour .	336
Sri Rejeki <sup>1, a)</sup> .....	336
TheEffecntof Giving Furfures Soybean Tempeh NuggetTowardReducing Cholesterol Levelof White RatBlood( <i>RattusNorvegicus</i> ) Hypercholesterolemia .....	341
Sufiati Bintanah <sup>1, a)</sup> , Erma Handarsari <sup>2</sup> .....	341
Study of mechanical properties of prototype optical phase conductor for tropical climate conditions in Indonesia.....	347
Syamsudin Raharjo <sup>1, a)</sup> , Solechan <sup>2)</sup> , Rubijanto JP <sup>3)</sup> .....	347
Family Roles in Parenting of International Migrant Workers .....	351
Tri Nurhidayati <sup>1</sup> , Desy Ariyana Rahayu <sup>2</sup> , M Fatkul Mubin <sup>3</sup> .....	351
(LessThan Six Month) Infantsin Semarang.....	355
Yuliana Noor Setiawati Ulvie <sup>1a)</sup> , Erna Kusumawati <sup>2</sup> .....	355
Internalizing Conservation Values in <i>Conversation of Conservation (COC)</i> English Club of Sport Science Faculty towards 'I am Poem' .....	358
Betari Irma Ghasani <sup>1a)</sup> , Bagus Dwi Pambudi <sup>2</sup> .....	358
Classroom Management in Learning (Objectives, Functions, Principles and Approaches).....	361
Abdul Hamid <sup>1a)</sup> .....	361
Developing Autonomous Learning Using Web 2.0 in a Digital Age: Building Language Learners' Content Knowledge and Improving Writing Skills .....	366
Djoko Sutrisno <sup>1a)</sup> .....	366
Applying Character Learning Strategy for Teaching Mathematics, A Case Study of Secondary School Students .....	371
Masrukan <sup>1, a)</sup> and Muhammad 'Azmi Nuha <sup>2, b)</sup> .....	371
Applying Character Learning Strategy for Teaching Mathematics, A Case Study of Secondary School Students .....	375
Septian Aji Permana <sup>a</sup> , Dewi Liesnoor Setyowati, Achmad Slamet, Juhadi .....	375
The Transformation Management of Catholic Educational Institution-Based on Solidarity, Subsidiarity, Success Together Management (3SM) Guarantee The Existence, Quality, Quantity and Continuity.....	383



Fransiskus Janu Hamu <sup>a)</sup> & Fransiskus Dheidae .....	383
Internationalization of Indonesian Local Culture Values.....	390
Pardi Suratno .....	390
Natural Science, Social Science And Humanity.....	397
Suyahmo .....	397
Implementation of Scientific Approach Through Learning Art Dance Model Management at Elementry School.....	403
Wahira.....	403
Teaching and Evaluating Writing in Literacy-Based Program .....	409
Debora Tri Ragawanti.....	409
The Effectiveness of Discovery Learning Model by Recitation Toward Critical Thinking Abilities of Seventh Grade Students .....	413
Eny Sulistiani .....	413
Bernard Lonergan’s Learning Model for Higher Education .....	420
Aloysius Rusmadji .....	420
Utilizing Mobile Phone Video in Teaching Sepak Takraw Gunting Spike.....	428
I Ketut Semarayasa .....	428
The Role of Beauty Care Education in Developing Beauty Creative Industry.....	433
Marwiyah .....	433
Contribution of Educational Technology in the Development Constructivistic Learning Model Culture Based and Character .....	440
R. Mursid .....	440

# The Use of Computer Media on Dysgraphia Children in Learning Writing

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**Abstract.** According to O'hare et Brown (1989), dysgraphia is development tardiness or an anomaly or disturbance in writing. It is a permanent and continued disruption in writing ability as well as functional disruption that is indicated by inability in making movement: very slow movement or very quick movement, so that the writing is unreadable and unorganized. Formulation of problem in this article is how the use of computer media on children with dysgraphia in writing ability. The aim is to figure out the writing ability of children with dysgraphia with the use of computer media. Dysgraphia sufferers focus their attention on the picture of letter. They can not write, hear, and think simultaneously at the same time, as of writing activity is such cognitif burden for them (Duband 2015:12). Concentration and eye coordination, as well as hands movement to write are hard ordeal for dysgraphia sufferers. So that it needs to teach them how to write by pressing keyboard buttons in computer in order to reduce their ordeal. Computer media is able to help children with dysgraphia in learning how to write. It is not necessary for them to hold pencil to write as holding pencil is one of difficulty for them. Therefore computer media can reduce fear level of children with dysgraphia in learning writing.

## INTRODUCTION

According to O'hare et Brown (1989), dysgraphia is development tardiness or an anomaly or disturbance in writing. It is a permanent and continued disruption in writing ability as well as functional disruption that is indicated by inability in making movement: very slow movement or very quick movement, so that the writing is unreadable and unorganized.

Dysfunction of the brain or the nerves cause various anomalies in their behavior and adapt to the environment. One of the dysfunction of the brain or the nerves that can cause complications for the sufferer to obtain language competence, ie people unable to understand verbal information, the information and provide information orally or in writing.

The act of providing daily information or writing involves various muscles, articulation and maturity of the brain (spatial orientation, mastery of the spoken language, attention), especially the upper muscles of articulation and the prime mover in writing activities (Moczadlo 2010: 10). Dysgraphia can be experienced by children who suffer from disorders in the parts that have been mentioned by Moczadlo and also can be experienced by adults from stroke or trauma that causes brain dysfunction associated with writing.

The cause of dysgraphia is due to neurological factors, ie the factors of left front brain disorders that is associated with writing skills. This neurological disorder inhibits the ability of writing that includes physical barriers, such as can not hold a pencil steadily or bad handwriting. Children with dysgraphia disorder actually have difficulty in harmonizing memory with the control muscle movement automatically when writing letters and numbers.

Obviously children with dysgraphia disorder must be helped and given special treatment in order to be able to write properly. One can attempt to help and treating children with dysgraphia disorder that is by utilizing a computer media. Computer media used as aids for children in learning to write. Therefore, in this article discussed about how to use the computer media in children with dysgraphia in writing skills, so as to find out the benefits of computer media in children dysgraphia in writing skills.

## DISCUSSION

Learning disorder is a neurological disorder that affects the ability to receive, process, analyze or store information. Children with learning disorders may have the same level of intelligence or even higher than their peers, but often struggle to learn as fast as those around them. Problems associated with mental health and learning disorders are difficulties in reading, writing, spelling, remembering, reasoning and motor skills and problems in mathematics.

Dysgraphia can be distinguished by its dimensions, namely the difficulty experienced and the writing that is resulted by sufferers. Below is presented the difference of the three categories.

Tarbes distinguishes dysgraphia in two dimensions as follows.

1. Dysgraphia linguistic associated with the error writing the word, in a letter, for example the Indonesian word 'dari' was written 'bari', 'nuri' written 'muri', 'ubi' written 'upi'. In addition, another mistake is to reduce the letter or add a letter or an error in the decoding of words, for example: Da berkata (the first word about the letter i and the second excess-letter word t) should be written 'Dia berkata', Sayamakan ku e should be written Saya makan kue.
2. Dysgraphia motor relating to the bad shape of the letter (grapheme).

Deuel cited by Jover (2012: 23) states that dysgraphia is often associated with dysfunction of the others, for example a) dysgraphia linked to impaired language (dyslexia, impaired syntactic, language disorders, disortografi), b) dysgraphia associated with motor disorders (developmental disorders motor, impaired hand-eye coordination, impaired fine motor), c) dysgraphia associated with impaired cognitive function (interference sequential, impaired executive functioning, disruption of planning), d) dysgraphia linked to impaired spatial arrangement, spatial structures, and interference visio-spatial.

Thus, it can be said that dysgraphia is related to lateral dominance disorders, body scheme (awareness of the body, its parts and its function and its relation to somesthetic sensors and visual), disorders of muscle tone and emotional-affective and interference adaptation.

Children or people who have dysgraphia need help from others to solve the problem. This is in accordance with Vygotsky's theory of the Zone of Proximal Development that the level of potential development, children or people with dysgraphia need to be assisted or guided to optimize the writing abilities.

One way that can be done by parents to help is to provide electronic aids to children such as a computer, laptop, or notebook. By using these tools, children will more easily understand their mistakes in writing exercises. Computers can be used for writing, drawing and arithmetic. For children can press the button and bring up a certain letter in a colorful display that is a great experience and full of wonder for them. Computers provide a variety of fonts and facilities to manipulate, change the size, color, font, and so on.

People with dysgraphia focus their attention on the "image" of letters. They can not write, hear, think simultaneously at any one time, so the act of writing is the cognitive load (Duband 2015: 12). Concentration and coordination of eye and hand movements to write a serious ordeal for people with dysgraphia. To reduce the pain, need to be taught how to write by pressing buttons located on the computer keyboard. Basically, when children with dysgraphia learn to write they are not burdened with the use of stationery such as ballpoint or pencil. This is because they focus their fingers to squeeze or press the buttons on the computer keyboard. Thus, they can focus more on writing and instead focus on his handwriting, so that the paper produced can be better and legible.

## CONCLUSION

Dysgraphia is the inability to write as seen from the bad shape of the letter written because the sufferer is not able to perform the cursive movement, making lines. Dysgraphia symptoms can be recognized when the writing process and writing results. Dysgraphia can be distinguished according to the dimensions and shape of the resulting writing of the sufferers. Treating dysgraphia can be done through the provision of appropriate tools and training. One of the dysgraphia treatment for children is by using computer tools so that children do not feel pressured to learn to write..

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