

ISSN:2443-2768



PROCEEDING INTERNATIONAL CONFERENCE

TRENDING ISSUES OF SCHOOL EDUCATION
IN ADVANCED COUNTRIES AND INDONESIA

Tuesday, May 12st 2015



PROCEEDING



Graduate School of The State University of Surabaya K.10 Bld
The State University Of Surabaya, Ketintang Campus
Surabaya, Indonesia

**PRODI DIKDAS & IPS
PASCASARJANA
UNIVERSITAS NEGERI SURABAYA**

**SUSUNAN PANITIA
SEMINAR INTERNASIONAL PENDIDIKAN
PRODI PENDIDIKAN DASAR & PENDIDIKAN IPS
PASCASARJANA UNIVERSITAS NEGERI SURABAYA**

Penanggung Jawab	: Direktur PPS Unesa Prof. Dr. I Ketut Budayasa, Ph. D	
Pelindung	: Asisten Direktur I PPS Unesa Prof. Dr. Ismet Basuki, M. Pd Asisten Direktur II PPS Unesa Prof. Dr. Siti Masitoh, M. Pd	
Steering Committee	: Prof. Dr. Wahyu Sukartiningsih, M. Pd Dr. Waspodo Tjipto Subroto, M. Pd Nasution, M. Hum, M. Ed, Ph. D Dr. Harmanto, M. Pd Dr. M. Jacky, S. Sos., M. Si	
Ketua Pelaksana	: Erfandi Darniafit	(Dikdas)
Wakil Ketua	: M. Jauhari	(IPS)
Sekretaris (Dikdas)	: Ardiyansah Yuliniar Firdaus	
Bendahara	: Khurin' in Sri Hidayati	(Dikdas) (IPS)
Sie Acara	: Imam Sunandar	(Dikdas)
Sie Kesekretariatan	: M. Rahman	(Dikdas)
Sie Humas & Akomodasi	: Solehun	(Dikdas)
Sie Penggalian Dana	: Arsanah Eko	(IPS)
Sie Konsumsi	: Ika Agustin Adityawati	(Dikdas)
Sie Perlengkapan	: Zainul Qudsi	(IPS)
Sie Pubdekdok	: Indra Patmoko	(Dikdas)

PROSIDING SEMINAR INTERNASIONAL PENDIDIKAN
Trending issues of school education in advanced countries

PRODI PENDIDIKAN DASAR dan PENDIDIKAN IPS
PASCASARJANA UNIVERSITAS NEGERI SURABAYA

Reviewer :

1. Prof. Dr. Mansyur (Malaysia)
2. Dr. Waspodo Tjipto Subroto, M. Pd (Universitas Negeri Surabaya)
2. Nasution, M. Hum, M. Ed, Ph. D (Universitas Negeri Surabaya)
3. Dr. Harmanto, M. Pd (Universitas Negeri Surabaya)

KATA PENGANTAR

Dengan mengucapkan puji syukur alhamdulillah kehadirat Allah SWT, atas limpahan rahmat, taufiq, dan hidayah-Nya sehingga seminar internasional Trending issues of school education in advanced country (Finland, Japan, South afrika) and Indonesia dapat terlaksana dengan baik.

Proses penyelesaian prosiding seminar ini tentunya banyak mendapatkan bantuan dari berbagai pihak, untuk itu atas ketulusan hati dan amal baik bapak/ibu/saudara serta rekan-rekan mitra kerja yang telah membantu terwujudnya tulisan ini, penulis mengucapkan terima yang tak terhingga dan penghargaan yang setinggi-tingginya semoga Allah SWT.

Akhirnya, semoga hasil-hasil yang dirumuskan dalam prosiding ini dapat member inspirasi dan manfaat bagi dunia pendidikan dalam menghadapi persaingan dan laju perkembangan globalisasi.

Semoga karya prosiding ini bermanfaat untuk meningkatkan kualitas kinerja guru dalam proses pembelajaran bagi pembaca pada umumnya. Amin.

Surabaya, 1 April 2015
Ketua Panitia,

Erfandi Darniafit

No	Judul Materi	Penulis	Hal
1	Problematic and The Solutions in Primary Education of Indonesia	Wahyu Sukartiningsih	1-5
2	Japan's Fiscal Rehabilitation and Tax Education	Kiyoko Majima	6-14
3	Trending Issues of School Education in Japan	Prof. Tsuchiya Takeshi	15-18
4	Homeschooling an Alternative for South African Education Problem	Razafimaharo Serge Michel,Dea,Msc	19-26
5	Trending Issues of School Education in United States of America	Mr. Colin Welter	27

No	Judul Materi	Penulis	Hal
1	Learning Innovation For Macroeconomic Course In Economic Education	Waspodo Tjipto Subroto	28-34
2	Student Centered Lecturing: The Australian Culture On Lecturing In Sociological Perspective	M. Jacky	35-44
3	Main Activities Of Communicative Approach In Indonesian Language Teaching	Suhartono	45-53
4	Teaching Learning Techniques On Marketing And Business Students	Harti	54-58
5	Teaching With Heart At The Green School In Era Of Information Technology	Marzuki ¹ Fatma Agus Setyaningsih ²	59-66
6	Problem Solving Approach In Building Creative Thinking And Mathematical Communication Ability	Karlimah	67-72
7	Developing A Textbook Based On Argumentation Skills To Facilitate Students In Physics Instruction	Supeno ¹ Muhamad Nur ² Endang Susantini ³	73-80
8	Integrated Leadership And Green Education In Civic Subject Curriculum In Al-Muslim Primary Full-Day-School To Face The Global Challenges	Feri Tirtoni	81-84
9	Integrated Learning Learning As Model For Anti-Corruption Education Students High School In Malang	Rusdi	85-92
10	The Misunderstanding Of Punishment Concept In Schools	Arina Mufrihah	93-99
11	The Process In Designing Mathematics Student Worksheet Based On Scientific Approach	Hobri ¹ Susanto ²	100-109
12	The Development Of Comprehensive Assessment Instrument For School Learning Process	Anang Triyoso ¹ Sirojuddin ²	110-116
13	The Imperative Of Communication Technology For Indonesian Migrant Workers (Tki) To Necessities Of Children Educational Communication	Harun Achmad Sangaji ¹ Titik Purwati ²	117-124
14	Teacher Difficulties In Implementation "Curriculum 2013" On Elementary School Learning Proses In Malang City 2014 th	Yulita Pujiharti	125-135
15	Evaluation Of The Implementation Of A New Educational Paradigm Post-Reformation In Primary Schools In Salatiga	Wasitohadi	136-144
16	Education Budget Planning University Widya Gama Mahakam Samarinda	Rinawati ¹ Wellyansyah ²	145-151
17	Leadership Quality In Education For Development Of Human Resources In The Organizational Context	Rustamadji	152-158
18	The Effect Of Implementation Of Ssr Approach In Shaping Reading Enjoyment Behavior On The Library Visit (A Case Study On Students Of Sdn Pisang Candi 1 Malang)	Titik Purwati	159-167
19	Revitalization Of Batik Motifs Singasari Statue Throught Soft Skills Education At School	Amanah Agustin	168-174

20	Developing Textbook To Train Ability Solve Problems Electrolyte And Non Electrolyte Solution	Mujakir ¹ Sri Poedjiastoeti ² Rudiana Agustini ³	175-180
21	Development Of Teaching Materials Connect Passages Of Qur'an On Subject Of Heat And Its Displacement With Guided Inquiry Model	Mustika Wati ¹ Sri Hartini ² Patmalasari ³ Saiyidah Mahtari ⁴	181-186
22	The Role Of Quality Of Teaching And Learning In Influential Moderate Recognition Of Prior Learning And Experience (Rple) To The Success Of The Bachelor Education In-Service Teachers Programme (Beitp)	Slameto	187-195
23	Character Education Habituation For Students In The Elementary School	Ardiyansah Yuliniar Firdaus ¹ Ihwan Firmansyah ² Musafak ³	196-206
24	The Implementation Of Constructivism Theory In The Curriculum 2013 For Social Studies In Elementary School	Ika Agustin Adityawati ¹ Joko Septaryanto ²	207-216
25	Improvement Of Students Learning Achievement And Motivation With Contextual Learning Based On The Scientific Approach	Purwanti ¹ Khurin'in ²	217-225
26	Audioblog For Speaking Assessment Through Voxopop [™]	Dian Eka Indriani	226-236
27	Problem Based Learning To Improve Social Softskill And Multicultural Understanding For Elementary Student	Supriyati ¹ Nursalim ²	237-245
28	Collaborative Problem Solving Skills In Physics Learning	Binar Kurnia Prahani ¹ Leny Yuanita ² Mohamad Nur ³	246-253
29	Interactive Multimedia Learning In Physics	Iwan Wicaksono ¹ Paken Pandiangan ²	254-261
30	Effect Of The Job Satisfaction And Job Stress On Teacher Performance	Raya Sulistyowati ¹ M. Riadhos Solichin ²	262-269
31	Remediation Of Misconceptions Science Material Electrical Using Poe Strategi Aided Stimulaiton Phet Media In Primary School	Ramon Sinkiriwang Putrama	270-277
32	<i>Paguron</i> , The Model A Typical School In Indonesia (Descriptive Study Of The Theory Of Ki Hajar Dewantara	Chandra Bagus Nugroho	278-284

	About The National Education)		
33	The Effects Of Globalization Education System On Indonesian Islamic Colleges And The Students' Morality In Indonesia	Hairul Anwar	285-290
34	APPLICATION OF GUIDED DISCOVERY MODEL TO INCREASE STUDENTS' RESULT At SCIENCE SUBJECT IN THE 5 th GRADE OF RAHAYU STATE ELEMENTARY SCHOOL IN PATIA SUB DISTRICT PANDEGLANG	Saefullah	291-296
35	Contextual Learning Application To Improve Student Learning Outcome Topic Trading In Subject Social Studies Grade Iii In Primary School	Dian Lailatus Syarifah	297-303
36	The Analysis Of Comparing Education System Toward Developed Country And Developing Country	Dwi Wahyuni	304-309
37	The Implementation Of <i>Problem Based Learning</i> Based On Lesson Study In Improving Activity And Learning Output Of The 5 th Grader Students In Elementary School Of Sdn Ngaglik 01 Kota Batu	Helmina Mauludiyah	310-317
38	Software Development Learning To Write Text Explanation For Five Grade Students Of Sdn With Text Structur Mapping Strategies	Riya Santi	318-327
39	Improving Interest, Activeness, And Student Learning Outcome Using Problem Based Learning Model	Sista Paramita ¹ Tias A. Indarwati ²	328-359
40	The Effect Of Contextual Teaching And Learning Approach To Learning Outcomes Of Class V Primary School On The Concept Of Human Respiratory System	Roji Pahrul	360-366
41	Juvenile Delinquency: Social Study And The Solution	Ahmad Imam Khairi	367-380
42	Reconstruction Of Indonesia Education System Through Qualified Education	Abdul Munif	381-387
43	Application Of Scientific Approach To Improve Learning Outcomes Subtheme Heroism Attitude Student Four A Class Sdn Perak I Jombang	Sunarto	388-393
44	Model Application Problem Based Learning To Improve Student Learning Outcomes	Siti Sri Wulandari ¹ Meylia Elizabeth Ranu ²	394-408
45	Developing Integrated Teaching Instruments, Integrated Model On Subtheme <i>Keindahan Alam Negeriku</i> To Improve Students' Achivement In Grade Iv Elemetary School	Ratna Yuriani	409-416
46	Reading Comprehension Skill Of The Sixth Grade Students Of State Elementary School Of City And Suburban Area In Sidoarjo	Nurul Istigfaroh	417-426
47	Problem Solving Skills In Learning Physics	Nia Erlina ¹ Budi Jatmiko ² Iwan Wicaksono ³	427-445
48	Learning Software Development Stad Type Of Cooperative In The Materials And Broad Square Rectangle Primary Class Iv	Ernawati	446-453
49	The Implementation Of KKNI Based Curriculum In The Higher Education	Solehun	454-459

50	Factors To Knowledge And Opportunities Interest In Entrepreneurship (Students Program Study Of History And Sociology Of Ikip Budi Utomo Malang)	Puspita Pebri Setiani, M.Pd	460-465
51	Development Of Learning Tools Using Cooperative Model Stad Type On Naturan Studies Elementary School	Isnawati	466-471
52	Problem Based Learning Approach In Civics Lesson For Improving Student Learning Outcomes In Globalization Material For The IV Grade In SDN 08 Alang Lawas Padang	Ade Saputra	472-476
53	Learning Tool Oriented Development Ipa Scientific Approach To Training The Concept Of Thinking Skills And Control In Primary School Students	Muh. Erwinto Imran	477-492
54	The Development of Learning tool for social science subject (IPS) subtheme Islamic kingdom in Indonesia orienting in cooperative teaching model <i>Team Accelerated Instruction</i> (TAI) type For 5 th grader students in elementary school	Sudik	493-499



CERTIFICATE

International Conference



No. 2771/UN 38.8/LL/2015

This certificate is awarded to
Paken Pandriangan
in recognition of the support and invaluable services rendered as a
Speaker

on the occasion of the International Conference with topic
"Trending Issues of School Education in Advanced Countries and Indonesia
held on Tuesday, May 12th, 2015 at Auditorium K.10 Pascasarjana Unesa, Indonesia
Organized by Elementary Education and Social Studies
Graduate programme the State University of Surabaya (UNESA)

Director of Graduate Programme
The State University of Surabaya

Prof. Ketut Budayasa, Ph.D
NIP. 195712041994021001

The head of Study Programme
Elementary Education

Prof. Dr. Wahyu Sukartiningsih, M.Pd
NIP. 196801181994032003

The head of Study Programme
Education Social Studies

Nasution, M.Hum, M.Ed. Ph.D
NIP. 196608021992121001

Surabaya, May 12th, 2015
Chief of Organizing committee

International
conference
Trending Issues of School
Education in Advanced Countries
Erfandi Darmasiti, S.Pd
NIM. 137855041

INTERACTIVE MULTIMEDIA LEARNING IN PHYSICS

Iwan Wicaksono¹
Paken Pandiangan²

Email: iwan.wicaksono20@gmail.com
pakenp@ut.ac.id

Abstract

Interactive multimedia development efforts on the study of physics. As a first step it needs to be observed questionnaire responses and interviews to teachers to examine the use of interactive multimedia. The responses are used to distinguish the intensity of attitudes or feelings of students in the use of interactive multimedia learning physics. Results from this study are expected to be used as the first step in determining the appropriate strategy to develop interactive multimedia in teaching physics. Respondents were students at Senior High School 2 Genteng Banyuwangi 37 students of class X in the Academic Year 2014/2015. The questionnaire used to reveal the data of respondents to use interactive multimedia in teaching physics. Determination question questionnaire to test the validity Pearson Product Moment Correlation and Cronbach's Alpha reliability. Student response gives the result that the majority agrees in use laptops in learning physics, doing practical difficulties, and interest in using interactive multimedia.

INTRODUCTION

The first decade of the 21st century will be over soon so that it can prepare the required skills. 21st century skills directly affect teaching and learning. Duncan in (Larson & Miller, 2011) showed the skills of the 21st century is the increasing skill demands creativity, persistence, and problem solving combined with group activities. The Partnership for 21st Century Skills is an organization that incorporate 21st century skills into education so developed learning framework for the 21st century. Framework which describes the skills, knowledge, and skills needed for successful students to enter the working world today include: 1) core subjects and themes of the 21st century; 2) learning skills and innovation; 3) the skills of information, media, and technology; and 4) life skills and career (The Partnership for 21st Century Skills, 2009); (Duran, Yaussy, & Yaussy, 2011). The learning process should be built to educate vision by improving communication and collaboration skills, integrate technology and problem solving skills, as well as generating innovative and creative thinking (Anderson & Krathwohl, 2001).

Advances in science and technology can not be separated from changes in the field of education. Various efforts taken to improve the quality of education in promoting the development of science and technology. In an effort to improve the quality of education in Indonesia, the government is always trying to improve the educational curriculum, whether primary, secondary, and higher education. With these efforts are expected national education goals of forming qualified human resources and useful for the development of present and future can be achieved (Khoirudin, Wahyuningsih, & True, 2013). Regulation of the Minister of Education and Culture (Permendikbud) No. 69 of 2013 states that the rational development of curriculum in 2013 to answer the challenge, among others, related to the globalization of various issues related to environmental issues, and information technology, the rise of the creative and cultural industries, and the development of education in international level. Globalization will shift from an agrarian society lifestyle and traditional commerce and trade into a modern industrial society. Permendikbud No. 65 Year 2013 states that the standard process of primary and secondary education one of which is the utilization of information and communication technologies to improve the efficiency and effectiveness of learning.

The aim of science education system in the information age is bringing skills to obtain information not transfer into the definition (Aka, Guven, & Aydogdu, 2010). One of the goals of science education is to train students who are interested in science activity and aims to improve the academic achievement of students. Learning science can not be separated by physical laws, concepts, and theories that are fundamental (Azis, Yulianti, & Hand, 2006). Physics is intended to develop the ability to reason, to think analytically, inductive and deductive uses concepts and principles of physics. In the learning process does not provide information that is prepared but to teach students to how to learn, argue, understand and apply the required information.

The ability of science students in Indonesia showed an average score of 382 (Programme for International Student Assessment, 2012). Average scores are located on level 2 of the 6 existing level that students can explain the simple

context based on scientific knowledge. The score at the level of the average student in Indonesia has creative problem solving ability is low. In addition, the lack of understanding of physics concepts influenced by several factors including: 1) students have the initial assumption that physics is a difficult subject; 2) the presentation of learning physics that still is abstract so that students are less motivated; 3) students are less able to connect the new and old knowledge that has been taught; 4) students are less active role in teaching and learning; and 5) not utilize technology and information in the learning process (Wicaksono, 2015).

Along with the development of the 21st century, technology is used in improving and advancing the implementation of science education because of the potential to bring changes in the way teaching and learning. Effective use of technology in the learning process in the classroom have been a topic of research and development of student learning in science. Development of the learning process through the integration of pedagogical and technological activities from the application of technology. Increased use of computer technology in science education has the potential to encourage new forms of learning and overcoming difficulties berterkaitan with constructivist, inquiry learning and teaching (Srisawasdi, 2014). Use of computer technology can help the learning process into a learning environment that encourages students engage actively building a deep understanding of scientific concepts and processes of inquiry.

The media was instrumental assist teachers in achieving learning goals. Media is anything that can be used to deliver a message from the sender to the receiver so that it can stimulate the mind, feelings, concerns and interests of students that lead in the direction of the learning process (Khoirudin, Wahyuningsih, & True, 2013). Utilization of instructional media is packaged in the form of media based on Information, Communication, Technology (ICT) can improve the quality of education. Teachers should be able to innovate and be creative in order to design an attractive and meaningful learning for students through the use of computer media as a means to showcase concepts abstract physics become visible concrete.

Based on the above it is necessary to encourage the development of interactive multimedia in learning physics. As a first step it needs to be observed questionnaire responses and interviews to teachers to examine the use of interactive multimedia. The responses are used to distinguish the intensity of attitudes or feelings of students in learning physics accordingly. Results from this study are expected to be used as the first step in determining the appropriate strategy to develop interactive multimedia in teaching physics.

METHODS

Respondents were students at Senior High School 2 Genteng Banyuwangi 37 students of class X in the Academic Year 2014/2015. Questionnaires are a number of written questions that are used to obtain information from respondents in terms of reporting on the personal, or other things known (Arikunto, 2010). In this study, a questionnaire used to reveal the data of respondents to use interactive multimedia in teaching physics.

Before being used to collect data, research instruments need to be tested to prove that the instruments used is valid or not. Validity test is a measure that indicates the validity or the validity of an instrument (Arikunto, 2010). Said to be valid if the instrument can reveal the data of the variables studied appropriately. High and low validity of the instrument indicates the extent to which the data collected are not deviate from the description of the variable in question. Testing is done through a research instrument validation test by an expert judgment. Validated instruments will be checked and evaluated.

Any research conducted by using questionnaires necessary to test its validity. Validity test is useful to determine the validity or appropriateness of the questionnaire that researchers use to obtain data from respondents. Test the validity of Pearson Product Moment Correlation using correlating or connecting principle between the respective scores of items with a total score obtained in the study. The questionnaire used can be trusted as a means of collecting the data it needs to be tested reliability or level of confidence. In general, the reliability is defined as something that is trustworthy or credible circumstances. In the SPSS statistical Cronbach's Alpha reliability test serves to determine the level of consistency of the questionnaire used by researchers questionnaire can be reliable, although research is done repeatedly with the same questionnaire.

Questionnaire responses were analyzed by qualitative analysis descriptions. The questionnaire used in this study was a questionnaire enclosed as questionnaires that require short answers or the answers given by affixing certain. The reason is because the method uses a closed questionnaire is filled out, requires a short time, respondents focus on the subject and very easily tabulated and analyzed. The questionnaire consists of 15 statements, answered with a tick () choice answers have been provided. The scale is a set of values or scores assigned to the subject, object, or behavior with the intention of measuring the properties. In general, the scale used to measure attitudes, perceptions, values and interests. The scale does not reveal the success or failure, the strength or weakness of the measuring object. Scale only measures how much a person has traits or characteristics to be observed (Windiyani, 2012). The questionnaire results were analyzed using analysis of Likert and Thurstone (Prabowo, 2011). Choice answers in a Likert scale questionnaire are shown in Table 1.

Table 1. Choice and Weight Questionnaire Answers

Answer choice	Bobot
Strongly Agree (SA)	4
Agree (A)	3
Disagree (D)	2
Strongly Disagree (SD)	1

Thurstone scale analysis, aims to distinguish the intensity of attitudes or feelings towards a certain thing. Preparation of question items are sorted according to intensitasnya level, from the highest to the lowest. Weight of the question is the average value of the placement of the question in a category. After calculating each item melakukan questions, sorted from the large to the smallest weight.

Interviews were conducted in person or face to face with a few questions to the teacher of physics. Advantages of this technique is that if the interviewer can establish a good relationship with the respondent, the correct and accurate information will be obtained. Type used structured interview that the question had been provided previously.

RESULTS AND DISCUSSION

Test the validity of Pearson Product Moment Correlation using r_{table} significance of 5% with $N = 37$ is 0325. The test results of 15 questions in the questionnaire has a value greater than r_{table} , this indicates that the questionnaire meets the elements of validity or suitability questionnaire that researchers use to obtain data from respondents. Cronbach's Alpha reliability test using the same r_{table} validity test. The test results of 15 questions in the questionnaire has a value greater than r_{table} , this indicates that the questionnaire used can be trusted as a means of collecting data as shown in Table 2.

Tabel 2. Reliability Statistics

Cronbach's Alpha	N of Items
.637	15

Results of the questionnaire responses of students to use interactive multimedia in teaching physics using a Likert scale analysis can be shown in Figure 1.

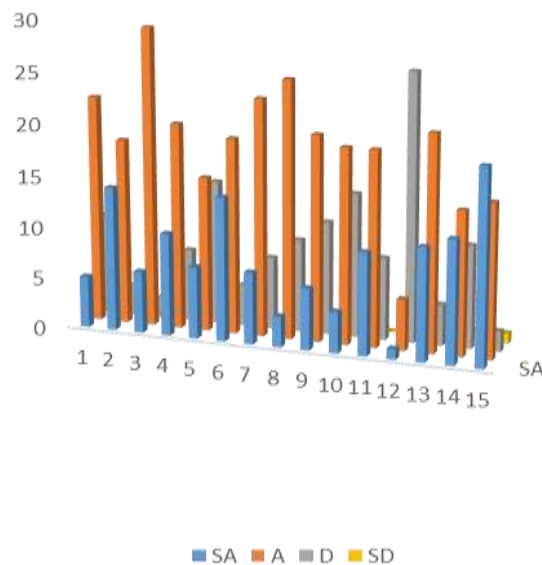


Figure 1. Results of student questionnaire responses Likert scale

Students majority agree in utilization laptop in learning physics, but students use a laptop for playing games and watching movies. This indicates that the learning process has not been using interactive multimedia. The use of interactive multimedia teacher more efficient conveying description so that more time learning to improve student learning activities in the classroom. Students look more active with marked more and more students are asking about the material that has not been understood.

When doing a practicum, students have difficulties when taking practical observation data, when making observations lab data graph, and analyze data on the observation lab. Difficulties experienced by these students can be reduced with the use of interactive multimedia as a very important role and assist teachers in achieving the learning objectives and perform the simulation lab. Media is anything that can be used to deliver a message from the sender to the receiver so that it can stimulate the mind, feelings, concerns and interests of students that lead in the direction of the learning process (Khoirudin, Wahyuningsih, & True, 2013). Utilize information and communication technology in schools is one of the efforts to improve the quality of education in Indonesia. Various studies both at home and abroad shows that the use of teaching materials are packaged in the form of ICT based media can improve the quality of education. Therefore, teachers should be able to innovate and be creative in order to design an attractive and meaningful learning for students.

The response of students interested in using interactive multimedia as evidenced from the students' answers. Through the use of interesting teaching strategies are accompanied by interactive multimedia for learning, thereby enhancing the creativity and motivation to learn physics. Creativity developed on helping students develop the capacity of the ideas and actions that prepare the success in the 21st century. Motivation is the driving force that encourages students to perform certain acts in order to achieve the expected goals.

Results of the questionnaire responses of students to use interactive multimedia in teaching physics as seen from the weight of the questionnaire questions were answered students using Thurstone scale analysis can be shown in Figure 2.

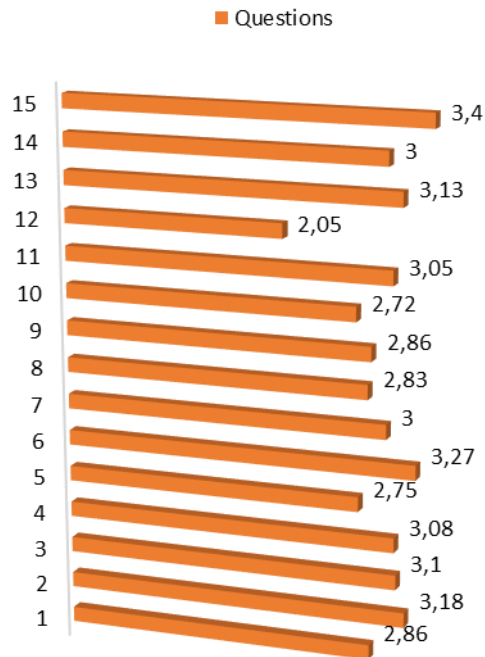


Figure 2. Results of student questionnaire responses Thurstone scale

Based on the above picture, the greatest weight is the question in which students expect no. 15 implementation of the learning process using interactive simulation. It is expected to interactive multimedia learning can increase student motivation to learn and understand the difficulty of the concept of physics. The smallest weighting is the question no. 12 that students do not get bored doing laboratory experiments. Students perform lab can train a scientific attitude, honest and likes to work together in accordance with the term I hear I remember, I see I know, I do I understands.

Results of interviews with teachers of physics indicate that the lack of use of interactive multimedia for only some of the software is known, the allocation of limited time in learning physics that only teaches the lecture, and the tendency to do laboratory experiments so that there is still an abstract concept for students.

CONCLUSION

The importance of appropriate use of interactive multimedia demands of the 21st century and curriculum 2013. Questionnaire responses are used to distinguish the intensity of attitudes or feelings of students in the use of interactive multimedia learning physics. Student response gives the result that the majority agrees in use laptops in learning physics, doing practical difficulties, and interest in using interactive multimedia. Through the use of interesting teaching strategies are accompanied by interactive multimedia for learning thus increasing the understanding of the concept, creativity and motivation to learn physics.

Results of this research should be ditindaklanjuti by developing interactive multimedia in teaching physics. The interactive multimedia encourages students

to think creatively so that it can help resolve problems that occur. Creative thinking developed in the students helped develop the capacity of ideas and actions that prepare the success in the 21st century.

REFERENCES

- Aka, E. I., Guven, E., & Aydogdu, M. (2010). *Effect of Problem Solving Method on Science Process Skills and Academic Achievement*. Journal of Turkish Science Education, 13-25.
- Anderson, L. W., & Krathwohl, D. (2001). *A Taxonomy for Learning, Teaching, and Assessing*. New York: Longman.
- Arikunto, S. (2010). *Prosedur Penelitian Suatu Pendekatan Praktik*. Jakarta: Rineka Cipta.
- Azis, A., Yulianti, D., & Handayani, L. (2006). *Penerapan Model Pembelajaran Kooperatif dengan Memanfaatkan Alat Peraga Sains Fisika (Materi Tata Surya) untuk Meningkatkan Hasil Belajar dan Kerjasama Siswa*. Jurnal Pend. Fisika Indonesia, 94-99.
- Duran, E., Yaussy, D., & Yaussy, L. (2011). *Race to the Future: Integrating 21st Century Skills into Science Instruction*. Science Activities, 98–106.
- Khoirudin, N., Wahyuningsih, D., & Teguh, D. (2013). *Pengembangan Media Pembelajaran Dengan Menggunakan Aplikasi Mindjet Mindmanager 9 untuk Siswa SMA Pada Pokok Bahasan Alat Optik*. Jurnal Pendidikan Fisika , 1-10.
- Larson, L. C., & Miller, T. N. (2011). *21st Century Skill: Prepare Student for The Future*. Kappa Delta Record, 121-123.
- Prabowo. (2011). *Metodologi Penelitian (Sains dan Pendidikan Sains)*. Surabaya: Unesa University Press.
- Programme for International Student Assessment. (2012). *What Students Know and Can Do—Student Performance in Mathematics, Reading and Science (Volume I)*. London: OECD Publishing.
- Srisawasdi, N. (2014). *Developing Technological Pedagogical Content Knowledge In Using Computerized Science Laboratory Environment: An Arrangement For Science Teacher Education Program*. Research and Practice in Technology Enhanced Learning, 123-143.
- The Partnership for 21st Century Skills. (2009). *A Framework for 21st Century Learning*. Tucson: AZ:P2 Available at: www.21stcenturyskills.org.
- Wicaksono, I. (2015). *Pengembangan Perangkat Pembelajaran Fisika Model Learning Cycle 5E Untuk Meningkatkan Pemahaman Konsep Siswa Pada Materi Fluida Statis*. Prosiding Seminar Nasional Pendidikan Sains 2015 (pp. 111-117). Surabaya: Program Studi Pendidikan Sains Pascasarjana Unesa.
- Windiyani, T. (2012). *Instrumen untuk Menjaring Data Interval Nominal, Ordinal dan Data Tentang Kondisi, Keadaan, Hal Tertentu dan Data untuk Menjaring Variabel Kepribadian*. Jurnal Pendidikan Dasar , 203-207.