

**LAPORAN AKHIR
PENELITIAN MANDIRI**



Metode Blended Learning pada Pembelajaran Bahasa Inggris

Peneliti

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**SEKOLAH TINGGI INFORMATIKA & KOMPUTER INDONESIA
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LEMBAGA PENELITIAN DAN PENGABDIAN PADA MASYARAKAT (LPPM)
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DAFTAR ISI

| | Halaman |
|--|---------|
| Halaman Pengesahan | i |
| Daftar Isi..... | 1 |
| Daftar Lampiran | 2 |
| Ringkasan..... | 3 |
| | |
| BAB 1. Pendahuluan..... | 4 |
| BAB 2. Tinjauan Pustaka..... | 6 |
| BAB 3. Tujuan dan Manfaat Penelitian | 9 |
| BAB 4. Metode Penelitian | 10 |
| BAB 5. Hasil dan Luaran yang Dicapai..... | 11 |
| BAB 6. Kesimpulan dan Saran | 12 |
| Daftar Pustaka | 13 |
| Lampiran | 14 |

DAFTAR LAMPIRAN

| | Halaman |
|--|---------|
| Lampiran 1. Instrumen Penelitian | 14 |
| Lampiran 2. Artikel Ilmiah | 20 |
| Lampiran 3. Dokumentasi..... | 29 |
| Lampiran 4. Isian Data Kinerja Penelitian..... | 30 |

RINGKASAN

Mengintegrasikan pembelajaran tatap muka dan online saat ini sudah berkembang pesat. Blended learning adalah model pembelajaran yang mampu meningkatkan dan mengoptimalkan pembelajaran. Makalah ini menjelaskan perilaku peserta didik dalam blended learning melalui Learning Management System (LMS), eBelajar. Model ini adalah kombinasi dari lingkungan tatap muka dan pembelajaran online yang terdiri dari banyak aplikasi seperti rekaman suara mahasiswa, peran pengguna, kursus, aplikasi keamanan pemeriksaan, urusan mahasiswa, layanan konseling, komunikasi internal, proses direktur dan evaluasi. Tujuan dari penelitian ini adalah untuk mengetahui sejauh mana perilaku mahasiswa dengan melakukan evaluasi eksperimental model pembelajaran campuran. Kami selanjutnya berusaha memahami perilaku, sikap, dan prestasi mahasiswa. Partisipan penelitian ini adalah 37 mahasiswa dari semester pertama departemen Teknologi Informatika (TI). Para mahasiswa diperkenalkan dengan pendekatan dengan menggunakan 'eBelajar', Sistem Manajemen Pembelajaran. Berdasarkan hasil implementasi blended learning dalam proses belajar mengajar, para peneliti menyadari bahwa model blended learning memberikan pengalaman pendidikan yang lebih efektif dan efisien daripada pembelajaran tatap muka tradisional. Selain itu, penelitian ini berkontribusi pada ilmu pengetahuan dengan mengidentifikasi bahwa pengaruh sosial memiliki dampak yang kuat pada kinerja dan usaha yang diharapkan serta perilaku. Sebuah survei yang dilakukan pada akhir kursus juga menunjukkan bahwa mahasiswa puas dengan penggunaan blended learning dalam proses belajar mengajar, dan prestasi akademik mereka juga lebih baik dari yang diharapkan. Disarankan bahwa tenaga pengajar dan mahasiswa dapat menggunakan blended learning untuk mata pelajaran lain untuk membuat proses belajar mengajar lebih hidup dan membuat mahasiswa merasa senang bergabung dalam proses pembelajaran.

BAB 1

PENDAHULUAN

1. Latar belakang

Salah satu tujuan tenaga pengajar dalam pembelajaran bahasa asing adalah memahami kemampuan mahasiswa dalam mengakses informasi selama belajar mengajar. Baru-baru ini, pengenalan TIK ke dalam pendidikan salah satunya pengajaran *English as a Foreign Language* (EFL) telah mulai menyampaikan pembelajaran mandiri yang diformat di situs web, media sosial, serta aplikasi pendidikan. Namun isi halaman-halaman tersebut menawarkan sedikit interaksi antara tenaga pengajar dan mahasiswa. Dengan implementasi TIK dalam beberapa dekade ini, memainkan peran yang semakin penting dalam pengajaran dan pembelajaran saat ini, salah satu pendekatan baru yaitu blended learning telah dipraktikkan dan diimplementasikan oleh banyak lembaga tinggi di seluruh dunia. Salah satu perluasan potensi pedagogis TIK untuk pengajaran dan pembelajaran (Hong, 2011).

Tantangan yang dihadapi oleh lembaga pendidikan tinggi saat ini adalah untuk mengetahui bagaimana membangun dan menggunakan lingkungan belajar yang sangat mendukung dimana dapat digunakan untuk memberikan instruksi pembelajaran tatap muka, kolaborasi kelompok mandiri, serta kebutuhan pembelajaran jarak jauh. Ini bisa diwujudkan dalam pengaturan pembelajaran campuran, blended learning.

2. Rumusan Masalah

Penelitian ini merupakan upaya untuk mengeksplorasi kemungkinan kesenjangan disiplin dan mengembangkan beberapa prinsip lintas disiplin dalam konteks pembelajaran campuran, dapat dirumuskan dengan : Bagaimana perilaku mahasiswa dalam pembelajaran bahasa Inggris melalui Blended Learning?

3. Tujuan Penelitian

Penelitian ini menawarkan kontribusi untuk pengetahuan yang mengarah pada pembentukan model pembelajaran campuran yang mendasar pada tahap selanjutnya dari penelitian lainnya. Penelitian ini bertujuan untuk perubahan

penting dari pembelajaran konvensional menuju wawasan tentang prinsip-prinsip pembelajaran campuran yang didukung oleh teori pendidikan

4. Manfaat Penelitian

Pertama, blended learning umumnya dianggap memiliki potensi besar untuk membawa transformasi luas di institusi untuk meningkatkan efektivitas dan efisiensi kegiatan belajar mengajar. Kedua, temuan penelitian tentang blended learning EFL akan sangat penting dalam meningkatkan pencapaian target mengajar terkait tujuan pembelajaran

5. Batasan Penelitian

Batasan penelitian ini adalah penerapan metode blended learning dalam pembelajaran bahasa Inggris untuk 37 mahasiswa Teknik Informatika semester pertama di STIKI Malang

6. Batasan Istilah

Istilah blended learning lebih umum digunakan untuk merujuk pada kombinasi pembelajaran dan pengajaran online dan tatap muka (Bliuc, Goodyear & Ellis, 2007; Picciano, 2013). Blended learning, dalam pengertian ini, adalah fenomena yang berbeda dan menyoroti peran teknologi dalam pembelajaran bahasa Inggris (Motteram & Sharma, 2009)

7. Target Luaran

Target luaran penelitian ini adalah publikasi di jurnal nasional tidak terakreditasi

BAB 2

TINJAUAN PUSTAKA

2.1 Awal Blended Learning

TIK yang digunakan di universitas atau dalam konteks pendidikan disebut teknologi pendidikan. Di masa lalu, teknologi pendidikan digunakan oleh akademisi dan siswa terutama untuk tujuan komunikasi, untuk menyampaikan pesan dan informasi. Teknologi pendidikan, terutama Internet dan email, memiliki dampak yang berpengaruh pada pengaturan informasi dan komunikasi konvensional dalam pendidikan tinggi. Penelitian dan pengembangan paket courseware, lingkungan pembelajaran online dan pengajaran yang efektif dengan teknologi telah berkembang. Studi-studi ini mengakui bahwa teknologi pendidikan meningkatkan pembelajaran dan pengajaran di kelas tradisional. Sharpe et al. (2006) melaporkan bahwa perpaduan antara pembelajaran dan pengajaran tatap muka dengan fasilitas web menyebar tidak hanya di Inggris tetapi juga di negara-negara lain seperti Australia dan Amerika. Survei Sloan Consortium oleh Allen et al. (2007) memberikan bukti kuantitatif luas yang menunjukkan bahwa pembelajaran dengan teknologi telah tumbuh secara dramatis dan berpengaruh di Amerika Utara. Baik Sharpe dkk. (2006) dan Allen et al. (2007) menunjukkan pembelajaran yang dimediasi oleh teknologi pendidikan - blended learning merupakan tren utama dalam pendidikan tinggi saat ini.

Pemikiran kembali belajar dan mengajar di pendidikan tinggi, sebagai percakapan antara pendidik dan peserta didik yang dimediasi oleh teknologi pendidikan. Blended learning sebagai pendekatan mendasar untuk meningkatkan pembelajaran dan pengajaran dengan memikirkan kembali dan meninjau kembali praktik saat ini. Macdonald (2008) juga menekankan bahwa blended learning mendorong para akademisi untuk berhenti dan memikirkan seluruh konteks pembelajaran dan pengajaran, terutama untuk mengingat kembali unsur manusia dalam perkuliahan, tutorial atau diskusi ad-hoc di koridor-koridor kampus bahwa komunikasi apa pun yang menggunakan teknologi bisa campur tangan. Blended learning, dalam hal ini, muncul sebagai solusi sugestif dalam menanggapi tekanan dan kualitas pembelajaran dan pengajaran.

2.2. Istilah Blended Learning

Sampai saat ini, blended learning telah meresap di sektor pendidikan di Inggris. Sebelumnya, perusahaan yang mengadopsi blended learning adalah Consignia (The Post Office) dan Chartered Institute of Marketing (Reay, 2001). Dalam pendidikan tinggi, Laurillard (1993) pertama kali menyediakan model untuk memikirkan kembali pengajaran pendidikan tinggi sebagai hasil dari teknologi yang ditanamkan. Kemudian, Salmon (2000) memperkenalkan model e-moderating untuk pengajaran dan pembelajaran online. Kedua model Laurillard (2002) dan Salmon (2002) berkembang dan dikutip oleh banyak peneliti. Namun, mereka tidak secara langsung menggunakan istilah "blended learning" karena definisinya tidak jelas pada waktu itu. Macdonald (2006) mengamati bahwa kata 'campuran' biasanya digunakan dalam buku resep dan tidak ilmiah atau akademis. Terlepas dari kritik ini, Jones, et al. (2009) menyatakan bahwa blended learning saat ini telah diadopsi secara luas dan telah berkembang pesat di seluruh dunia. Para peneliti ini mengklaim bahwa ini merupakan peluang nyata untuk meningkatkan pengalaman belajar di pendidikan tinggi dengan waktu yang fleksibel dan di tempat yang fleksibel. Blended learning dapat bersifat universal, melintasi batas global dan menyatukan kelompok pendidik dan siswa dari zona waktu dan lokasi geografis yang berbeda.

2.3 Kesempatan dan Tantangan dalam Blended Learning

Blended learning merupakan kesempatan untuk mengintegrasikan kemajuan teknologi dengan interaksi fisik yang ditawarkan oleh kelas tatap muka (Ali, 2014). Integrasi semacam itu dapat mengkompensasi kekurangan pembelajaran di kelas dan pembelajaran online. Waktu dan ruang, dalam hal ini, adalah kendala khas untuk pengaturan ruang kelas tradisional. Dalam kelas besar, kurang perhatian diberikan kepada siswa secara individu. E-learning atau pembelajaran jarak jauh yang lengkap berpotensi mengurangi partisipasi pelajar dalam proses pembelajaran. Selain itu, kontak dan komunikasi dalam pengalaman pembelajaran online tampaknya kurang manusiawi karena masalah interaksi (Graham, 2006). Blended learning, dalam hal ini, mendapatkan kekuatan dari pembelajaran elektronik dan tatap muka. Hofmann (2006) juga melaporkan bahwa dengan memadukan kelas

tradisional dan pembelajaran online, akan lebih efektif untuk mengajar kelompok yang lebih besar atau lebih kecil, atau bahkan menyediakan bimbingan pribadi.

2.4 Pendidikan dan Teknologi Pendidikan

Untuk memahami apa "pendidikan dalam teknologi" dan bagaimana teknologi berkontribusi pada pembelajaran, peneliti meminjam ide Kozma (1994), yaitu pemahaman tentang struktur yang mendasarinya dan mekanisme sebab-akibat yang dengannya mereka dapat berinteraksi dengan proses kognitif dan sosial fitur penting daripada permukaan teknologi. Di sisi lain, teori belajar perlu didasarkan pada keprihatinan duniawi seperti apakah teknologi pendidikan digunakan secara efektif dan dengan cara terbaik untuk berinteraksi dengan proses kognitif dan sosial. Peneliti menyimpulkan teknologi adalah aktivitas manusia yang sarat dengan nilai yang terhubung dengan pengaruh sosial-budaya dan lingkungan dalam konseptualisasi, dan ada lima cara di mana teknologi sarat dengan nilai:

1. Nilai suatu teknik mencerminkan nilai-nilai siapa yang membuatnya dan menggunakannya.
2. Teknologi optimis dalam memberikan nilai pada "kemajuan teknologi".
3. Teknologi dibatasi nilai sejauh penggunaan sumber daya untuk kemajuan dapat menghalangi penggunaannya dalam pekerjaan lain yang dapat meningkatkan kehidupan.
4. Institusionalisasi teknologi modern memungkinkan arah teknologi dipengaruhi secara eksternal oleh organisasi daripada oleh para praktisi.
5. Produk teknologi adalah ekspresi dari nilai-nilai individu dan budaya desaine

BAB 3

TUJUAN DAN MANFAAT PENELITIAN

Penelitian ini untuk mengidentifikasi dan menganalisis pengalaman pembelajaran campuran saat ini dan variasinya dalam konteks pembelajaran Bahasa Inggris. Ini adalah salah satu kontribusi independen, kontribusi baru untuk pengetahuan adalah refleksi pada tinjauan literatur dan temuan dari studi komparatif. Kontribusi seperti itu mengarah pada pengembangan model dan prinsip-prinsip pembelajaran campuran.

Pentingnya penelitian ini berkaitan dengan topik dan implikasi praktis dari temuan. Pertama, blended learning umumnya dianggap memiliki potensi besar untuk membawa transformasi luas di lembaga pendidikan tinggi untuk meningkatkan efektivitas dan efisiensi kegiatan belajar mengajar. Namun, pekerjaan blended learning di beberapa lembaga pendidikan tinggi masih pada tahap eksplorasi dan implementasi awal (Graham, Woodfield & Harrison, 2013). Meskipun tenaga pengajar memainkan peran sentral dalam mewujudkan potensi blended learning, penelitian terbatas telah dilakukan untuk mengeksplorasi bagaimana potensinya dipahami dan dimanfaatkan oleh para tenaga pengajar faktor-faktor apa yang mempengaruhi pemahaman mereka dan pemanfaatan blended learning. Dalam konteks Indonesia beberapa lembaga pendidikan tinggi menggunakan blended learning dan hingga saat ini. Ini adalah studi pertama tentang persepsi tenaga pengajar dan praktik blended learning. Oleh karena itu, diyakini bahwa penelitian ini dapat berkontribusi untuk meningkatkan kesadaran praktisi pendidikan dan administrator tentang potensi blended learning dan meningkatkan implementasi blended learning tidak hanya dalam pendidikan bahasa, tetapi juga dalam disiplin ilmu lain.

Kedua, implementasi blended learning di negara lain tampaknya sangat sejalan dengan tujuan reformasi dalam hal integrasi TIK dan pendidikan EFL. Oleh karena itu, temuan penelitian tentang blended learning EFL di Indonesia akan sangat penting dalam meningkatkan pencapaian lembaga pendidikan tinggi terkait tujuan reformasi pendidikan. Temuan ini juga diharapkan berkontribusi pada efektivitas implementasi blended learning dan kualitas pendidikan EFL.

BAB 4

METODE PENELITIAN

Penelitian kualitatif ini dalam bentuk studi kasus dilakukan untuk mahasiswa EFL program studi Teknik Informatika, STIKI Malang. Melibatkan 37 mahasiswa semester pertama pada program studi tersebut. Peneliti mengumpulkan data dari LMS, dokumen, mahasiswa melalui observasi, kuesioner dan wawancara, dan catatan lapangan. Studi kasus ini digunakan oleh peneliti untuk menemukan data dengan langkah-langkah berikut, yaitu:

1. Mendefinisikan kasus penelitian
2. Pengumpulan data (observasi, wawancara, analisis dokumen)
3. Menganalisis data: mengatur, memperbaiki, melaporkan, triangulasi.
4. Membuat proposisi
5. Menemukan teori baru sebagai kontribusi bagi tubuh pengetahuan

BAB 5

HASIL DAN LUARAN YANG DICAPAI

Tenaga pengajar menggunakan dua strategi utama untuk memfasilitasi belajar mandiri mahasiswa secara online. Yang pertama adalah meminta mahasiswa untuk menyelesaikan latihan spesifik secara online. Dalam wawancara, semua peserta melaporkan bahwa mereka sering meminta mahasiswa untuk masuk ke program pembelajaran online untuk berlatih bahasa tersebut baik struktur atau keterampilan yang diajarkan dalam sesi tatap muka. Semuanya juga diamati secara eksplisit mengharuskan mahasiswa untuk menyelesaikan serangkaian latihan online yang ada berkorelasi dengan pelajaran di kelas tatap muka.

Strategi kedua yang digunakan adalah mendorong mahasiswa untuk menggunakan komponen pembelajaran online dengan memperkenalkan mereka pentingnya pembelajaran online dan menunjukkan alat dan perangkat lunak yang tersedia di pembelajaran online. 17 dari seluruh peserta (46%) tampaknya menggunakan strategi ini. Tenaga pengajar mengamati dan mendorong mahasiswa belajar online untuk meningkatkan bahasa Inggris pengucapan, persiapan untuk tes dan memperoleh kemampuan bahasa Inggris.

Dalam wawancara, 12 peserta (32.4%) juga melaporkan upaya mereka mendorong mahasiswa untuk menggunakan alat dan perangkat lunak pembelajaran bahasa secara online. Alat dan perangkat lunak termasuk perekam audio digital, kamus online, media social dan lain-lain yang semuanya tertanam dalam LMS, eBelajar.

BAB 6

KESIMPULAN DAN SARAN

Berdasarkan hasil penelitian pada pembelajaran EFL saat ini, penerapan blended learning perlu mempertimbangkan sosio kultural dengan cermat dan konteks kelembagaan, menerima saran dari berbagai penelitian tentang pengembangan profesional tenaga pengajar bidang bahasa untuk implementasi pembelajaran online dan campuran serta mengadaptasi model yang dibuat oleh penelitian sebelumnya. Penelitian ini mengusulkan profesionalitas tenaga pengajar serta program pengembangan untuk EFL blended learning. Program pengembangan profesional terdiri dari empat fase:

1. Meningkatkan kesadaran
2. Menggali potensi pembelajaran campuran
3. Mengintegrasikan ide pembelajaran campuran
4. Menerapkan dan mengevaluasi praktik implementasi

Berdasarkan pemahaman peneliti tentang blended learning sebagai hasil dari penelitian ini, peneliti percaya bahwa blended learning harus diimplementasikan tidak hanya dalam pendidikan EFL tetapi juga dalam disiplin ilmu lain, tidak hanya di sekolah-sekolah dan universitas tetapi juga di semua pendidikan pusat, karena potensinya untuk meningkatkan pembelajaran aktif dan kolaboratif. Peneliti perlu mengkonfirmasi kembali bahwa pentingnya untuk memfasilitasi EFL dengan metode blended learning.

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LAMPIRAN-LAMPIRAN

Lampiran 1. Instrumen Penelitian

Desain Pembelajaran yang diimplementasikan melalui eBelajar, Learning Management System

| Identitas Mata Kuliah | | Identitas Pengampuh | |
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| Semester | : Ganjil | Phone | : 085646406644 |
| MK Prasyarat | : - | | |

A. Capaian Pembelajaran Mata Kuliah:

Setelah mengikuti mata kuliah bahasa Inggris untuk teknik informatika mahasiswa mampu memahami, menganalisa, menggunakan, dan menerapkan kosa kata dan tata Bahasa Inggris dalam 4 keahlian berbahasa yaitu mendengarkan, berbicara, membaca dan menulis dalam Bahasa Inggris dengan benar.

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B. Organisasi Materi Bahan Kajian

| Capaian Pembelajaran | Pokok Bahasan | Sub Pokok Bahasan | Pokok Materi |
|---|--|---|--|
| <p>1.1. Students are able to understand the purpose of English for IT</p> <p>1.2. Students are able to interpret and using the vocabulary related to computer users</p> | <p>• Introduction • Computer users</p> | <p>1. Computer make the world smaller and smarter</p> <p>2. Computer Users</p> <p>3. Narrative text</p> <p>4. Simple past tense and past perfect</p> | <p>1.1 Understanding the text entitle “<i>computer make the world smaller and smarter</i>”</p> <p>1.2 Criticizing and answer the questions based on the text “ <i>computer make the world smaller and smarter</i>”</p> <p>2.1 Noting specific information (Listening Skill)</p> <p>2.2 Enhancing information (Speaking Skill)</p> |
| | | | <p>3.1 Writing narrative text</p> <p>4.1 Simple past tense</p> <p>4.2 Past perfect</p> |
| <p>2. Students are able to identify, analyze, and implement the vocabulary related to the topic of computer today</p> | <p>□ Computer Today</p> | <p>1. Living in digital age</p> <p>2. The specification of the computer in this digital age</p> <p>3. Simple present tense and simple progressive tense</p> | <p>1.1 Understanding Living in digital age</p> <p>1.2 Finding the difficult word in the text “what is a computer?”</p> <p>2.1 Find the specification of computer in the digital age</p> <p>2.2 What is Inside PC System?</p> <p>2.3 How to choose the best computer in the digital age</p> <p>3.1 Simple present tense</p> <p>3.2 Simple progressive tense</p> |

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| <p>3. Students are able to explain and create simple sentence by using the words in the field of <i>computer application and application program</i></p> | <p>☐ Computer application and application program</p> | <p><i>Computer application and Application program (Data mining)</i> <i>Passive voice</i></p> | <p>1.1 What is <i>Data Mining</i>? 1.2 How to run the application 2.1 Make simple sentence by using passive voice</p> |
| <p>4. Students are able to classify, analyze, and implement the vocabulary related to storage devices</p> | <p>☐ Storage devices</p> | <p>1. What is storage devices? 2. How to save the data by using storage devices 3. Words building</p> | <p>1.1 What is storage devices? 1.2 Understanding the content of the text “Storage devices” 1.3 Criticizing the text 2.1 How to save the data 2.2 Kind of storage devices 3.1 Creating simple sentence 3.2 Arrange the words</p> |
| <p>5. Students are able to identify and</p> | <p>☐ Peripherals</p> | <p>1. What is peripherals?</p> | <p>1.1 Understanding what peripherals is</p> |
| <p>understand kind of <i>peripherals</i> and its function</p> | | <p>2. What kind of peripherals? 3. What is the function of peripherals? 4. Tenses comparison and contrast.</p> | <p>1.2 Analyzing the content of the text 2.1 Kind of peripherals 3.1 The function of peripherals 4.1 Make simple paragraph about comparison and contrast</p> |

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| <p>6. Students are able to apply the vocabulary in related to basic software in the spoken and written form</p> | <p>□ Basic software</p> | <p>1. What is basic software? 2. What kind of basic software? 3. Tenses countable and uncountable noun</p> | <p>1.1 Explain the text of basic software 1.2 What is the difficult word in basic software 2.1 Type of basic software and its function 2.2 Write the summary in descriptive text about basic software 3.1 Countable and uncountable noun</p> |
| <p>7. Students are able to interpret and explain the vocabulary use in Graphic design</p> | <p>□ Graphic design</p> | <p>1. What is graphic design? 2. What is desktop publishing? 3. Language focus <i>gerund</i></p> | <p>1.1 Explaining the content of the text <i>graphic design</i> 1.2 Analyzing and criticizing the content of the text <i>graphic design</i> 2.1 Explain and criticizing about <i>Desktop Publishing</i> 3.1 Implementing <i>gerund</i> in the simple paragraph</p> |
| <p>8. Students are able to explain and analyze the vocabulary about <i>The world wide web</i> and <i>Website</i></p> | <p>□ The world wide web and website</p> | <p>1. What is <i>World Wide Web</i>? 2. How to get the info in the <i>world wide web</i> 3. What is <i>website</i>? 4. How to explain the content of <i>website</i> 5. Language focus <i>time clause</i></p> | <p>1.1 Giving info about <i>world wide web</i> 1.2 Find the difficult word in <i>world wide web</i> 2.1 Find the info trough <i>world wide web</i> 3.1 Find the knowledge about <i>website</i></p> |

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| | | | <p>4.1 Explain the process how to create website</p> <p>4.2 Create the paragraph about <i>world wide web and website</i></p> <p>5.1 Creating simple paragraph by using <i>time clause</i></p> |
| <p>9. Students are able to explain and use the vocabulary in the field <i>Graphical User Interfaces</i></p> | <p>☐ Graphical User Interfaces</p> | <p>1. The content of <i>graphical user interfaces</i></p> <p>2. Retell the content of the text <i>graphical user Interfaces</i></p> <p>3. Giving the info about <i>graphical users interfaces</i></p> <p>4. V-infinitive and to infinitive</p> | <p>1.1 Understanding the content of <i>graphical user interfaces</i></p> <p>1.2 Explaining graphic</p> <p>2.1 Retelling the content of the text</p> <p>2.2 analyzing the content of the text</p> <p>3.1 Giving info about graphic</p> <p>3.2 Explain the steps of graphic</p> <p>4.1 Implementing V infinitive and to infinitive in the simple paragraph</p> |
| <p>10. Students are able to understand, criticize, and implement the use of vocabulary related to <i>multimedia</i></p> | <p>☐ Multimedia</p> | <p>1. What is <i>multimedia</i>?</p> <p>2. What kind of <i>multimedia</i>?</p> <p>3. Giving info about <i>multimedia</i></p> <p>4. Using <i>-ing cause and effect</i></p> | <p>1.1 Explain the info of <i>multimedia</i></p> <p>2.1 Explain kind of <i>multimedia</i></p> <p>3.1 Give and explain the info about <i>multimedia</i></p> <p>4.1 Create sentences and implement <i>ing cause and effect</i></p> |

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|---|-------------------------------|---|---|
| <p>11. Students are able to analyze, interpret, and implement the vocabulary about <i>network and Internet</i></p> | <p>☐ Network and Internet</p> | <p>1. Network 2. Internet 3. Match the text and diagram 4. Giving info about the text 5. Strength and weaknesses of network and internet 6. Create as sentence by using <i>relative</i></p> | <p>1.1 What is network? 2.1 What is Internet? 3.1 Match the text and diagram 4.1 Explain the info about network and internet 5.1 Explain the strength and weaknesses the use</p> |
| | | <p><i>clause and participle</i></p> | <p>of network and internet 6.1 Create and implement relative clause and participle in the simple paragraph</p> |
| <p>12. Students are able to explain about <i>the future of IT</i> and implement it in the spoken and written form</p> | <p>☐ The Future of IT</p> | <p>1. What is telecommunication? 2. New technologies and the development 3. Future tense 4. Expressing opinion and argument</p> | <p>1.1 Explaining what telecommunication is 1.2 Criticizing the telecommunication in the today and future 2.1 The modern of game and technology 2.2 Kind of modern technology 2.3 the function and benefit of modern technology 3.1 understand the future tense in the relevant context 4.1 Give opinion and argument and implementing the appropriate language function such as in addition. In my opinion... 4.1 Write the opinion about the future IT.</p> |

Lampiran 2. Artikel Ilmiah

Students' Behavior on Language Learning through Blended Learning

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Integrating face to face and online learning are growing rapidly. Blended learning is a model of learning that able to enhance and optimize learning. This paper describes learners' behavior in the blended learning through University's Learning Management System (LMS). This model is the combination of a face-to-face environment and online learning which consist of many applications such as student voice recording, user roles, courses, examination security applications, student affairs, counseling services, internal communication, director processes and evaluation. The aim of this study is to find out the extent of students' behavior with performed experimental evaluation of blended learning model. We further attempt to understand students' behavior, attitude, and achievement. The participants of this study are 37 students from the first semester of Informatics Technology (IT) department. The students was introduced to a blended leaning approach using '*eBelajar*', a Learning Management System (LMS). Based on the results of the implementation blended learning in the teaching and learning process, the researchers realized that blended learning model provided more effective and efficient educational experience rather than traditional, face-to-face learning. Beside, this study contributes to the body of knowledge through identifying that social influence has a strong impact on both performance and effort expectation as well as behavioral intentions. A survey conducted at the end of the course also showed that students were satisfied with the use of blended learning in the teaching learning process, and their academic achievements were also better than expected. It is suggested that the teachers and students can use blended learning for others subjects in order to make the teaching learning process more alive and make the students feel enjoy in joining the learning processes.

Introduction

One of the teacher's goals of foreign language teaching is comprehend the students' ability in accessing the information during the teaching learning. Recently, the introduction of ICT into education, many EFL teaching have started

to deliver self-study formatted on website, social media, education application, and yet those pages' contents offers few interactions between teacher and students. With new ICT implementation plays more and more important role in current teaching and learning, one of the new approach blended learning has been practiced and implemented by many high institutions all over the world. It was the expansion of the pedagogical potential of ICT for teaching and learning (Hong & Sammy, 2010).

In universities level, it seems that the number of universities using blended courses is growing rapidly. Some estimates that the implementation of ICT in teaching showed the better students' achievement. The students like to access course materials anytime, anyplace and they are positive about the flexibility and convenience these blended courses provide them. That the awaited success and motivation in foreign language lectures remained incapable in traditional teaching methods revealed the adoption of the learner based approach and the need to improve the students' autonomous learning skills. In the scope of broad education, in distance learning environments, learning can be actualized by various ways as mail, radio and online learning. Distance learning environments are mediums, where no common physical places are in need for the learner and the instructor, and the learner is responsible for its own learning in the learning process.

Moreover, the busy students, such as the adult students in long-life learning education system, and blended courses help provide them with the flexibility they need to balance school and work. Al Azawei (2016), stated that blended learning, defined as a combination of face-to-face and online learning. Furthermore, blended-learning pedagogical model for teaching and learning ESP successfully through a virtual environment requires indeed a real effort to redesign an ESP course in which face-to-face teacher-led classes, an online platform monitoring and the cooperation between the instructional designers and the software engineers contribute to the creation of a more effective final product.

Other studies reported that learning effectiveness in terms of achievement, satisfaction, behavior, critical thinking skills, learner support, participation, interaction, and retention are similar or better than those of traditional face-to-face learning. Some studies about blended learning have been conducted and it tends to be “useful, enjoyable, supportive, flexible and motivator for learners” (Guzer,

2014). However, it is suggested that in order to obtain more conducive teaching-learning environment, teachers should encourage students to participate actively in online activities.

That is the reason why we argue for the need for integrating ICT into language teaching learning to provide pedagogically sound and interesting lessons and a blended learning approach can certainly enrich the language learning experience to the students. In this paper we use a framework and real life data to help our understanding of blended learning in practice and the way it fits the STIKI Malang's student.

Literature Review

The mixing of method of teaching has been used in several countries both face-to-face learning and online learning. This strategy, more than 20 years, blended learning is not new approach for effective teaching has been in used (Sharma, 2010). It is also emerged in the learning course and the accessibility of ICT outside the classroom. Besides, it is combining or mixing ICT to accomplish an educational goal, pedagogical approach to produce an optimal learning outcome.

In general, the integration of digital tools, materials and techniques with the physical classroom called blended learning .In a blended course, students may view lectures, access readings, forum discussion, asking questions, and completing the assignments through online classrooms. The other terms, such as mixed, hybrid, or integrative learning, all describe the same method of teaching. It is an instructional shifting of face-to-face learning and online learning into combining those method become a new strategy

Several researches have been done on blended learning in foreign language teaching, researchers found out that this strategy is not only benefit the learners in their language learning, but also for language educators. Blended learning, for educators offers access to global resources and materials that meet the students' level of interest and knowledge, improved teaching conditions, provides more opportunities for collaboration, improve their time efficiency and meaningful professional development.

Blended learning, for the students this space increases students' interest in their own learning process, enables students to learn at their own pace, and also

prepare students for future because blended learning offers a multitude of real-world skills, that will help students directly translate their research skills, self-engagement skills, self-learning skills, and of course computer literacy skills for life skills. This strategy also to create a learning environment that combines the best of both models and that works as a whole and concerned with the attempt to identify the optimum mix of course delivery in order to provide the most effective language learning experience" (Sharma, 2010).

Some research compared the effectiveness of the implemented blended learning format with that of conventional courses by examining students' learning outcomes as well as the level of satisfaction reported by educators and learners through course evaluations, focus groups and interviews. The research found out that although the results suggest that the blended courses were successful and had an increasing the satisfaction level over time, however, here was not a significant statically difference between the scores learners obtained in the two courses; that is to say, students' learning in both contexts was similar. Another research conducted by Comas-Quinn (2011) explored the impact of implementation of blended program by looking their level of satisfaction and learners' linguistic competence. The study based on survey and end of term test found out that the students' oral competence improved significantly and there was also notable progress in all other skills as well the students' satisfaction.

The new learning environments can impact teaching and learning is still in its infancy despite the many advocates for redesigning learning spaces. (Davies et al. 2013) reviewed 210 schools projects on creative environments for learning and claim the physical environment is key to better communication and creativity in the classroom. They evidence found that a creative environment can impact teacher professionalism and pupil performance. Byers et al. (2014) found that new spaces not only impacts students' attitudes, learning experience and level of engagement but also lead to better academic performance. The students to assess the impact of new learning spaces on teaching and learning over a period of a year. Then, they found that students' academic performance was better in the new space they were not able to make a link between ICT and student learning experience or between pedagogical practices and teachers.

Method

In this study, analyzing the effects on behavior and success within the application of blended learning environments on higher education level in English Foreign Language classes of students studying in the Informatics Technology Department, a research model with pretest and posttest control groups in scope of quasi experimental design has been used.

The population of the study is constituted by first semester students of the Informatics Technology program of STIKI Malang in the 2018-2019 academic years, and who have chosen English as a foreign language. The research group consists of 37 students and that belong to the experimental group. Then, conducted during one semester, about 14 meetings where the students belong the blended learning, combining online learning and face-to face learning during the period. Each meeting consist of 150 minutes by using Learning Management System '*eBelajar*' as an application tool to support this research.

The data collected through two methods as follow; the motivation scale developed by using Five Point Likert Scale as Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree. Then, for students' achievement, it's an achievement test aiming to evaluate the expected foreign language level of the students and is prepared by the researcher according to the topics in the course book. The motivation scale and the language test have been performed as a pretest before the experimental process and as a posttest after the accomplishment of the experimental process.

Findings

The researcher obtained the data by researching the effects on behavior and success within the application of blended learning environments on university levels in EFL classes of students studying in the Informatics Technology Department, the achieved findings have been converted into tables and interpreted. Below the table Average Scores and Standard Deviation Values of the English Language Achievement Test.

| Posttest | | Pretest | | |
|---------------------------|----|----------------|-------|-----------|
| Group | N | \bar{x} | df | \bar{x} |
| Experimental Group | 37 | 31.08 | 10.18 | 65 |

8.24

It can be realized that the success points of the experimental group attending English language classes in the blended learning environment is 31.08 before the application, and that the value after the application is 65. This finding indicates that the English language classes performed in the blended learning environment and the traditional learning environment have different effects by means of increasing success. It can be understood, that the blended learning environment, which approaches to more points on the English language achievement test scores before the experiment than the traditional learning environment, is more effective at increasing success in English classes.

Below the researcher showed the table of Average Scores and Standard Deviation Values of the Motivation Scale.

| Posttest | | Pretest | | |
|---------------------------|----|----------------|-------|-----------|
| Group | N | \bar{x} | df | \bar{x} |
| Experimental Group | 37 | 55.80 | 10.62 | 74.77 |

3.99

It seen on the table that the motivation points of the experimental group attending English classes in the blended learning environment before the application are 55.80, this value becomes after the experiment 74.77.

Therefore, it has been found that a significant difference motivation towards English language students in attending English language classes in blended learning environments before and after the experiment. In other words, it has been confirmed, that the learning environments have significant effect on the repeated measurement factors of motivation towards English language classes. This finding indicates that the English language classes performed in the blended learning environment have different effects by means of increasing motivation. It can be understood, that the blended learning environment, which approaches to more

points on the motivation scale scores before the experiment. It is more effective in increasing motivation in English language classes.

Besides, to support the statistical data, the researcher conduct an interview to find out the implementation of blended learning to the English classes with the result below;

| | |
|-------------------|-------|
| Strongly Agree | 78.3% |
| Agree | 15.4% |
| Neutral | 4.2% |
| Disagree | 2.1% |
| Strongly Disagree | 0% |

Discussion

The findings of before and after the implementation blended learning by means of success in the English foreign language classes of experimental group indicate that the English language classes performed in the blended learning environment has different effects by means of increasing success. It can be understood, that the blended learning environment, which approaches to more points on the English language test scores before the experiment. That is more effective in increasing success in English classes. The blended learning method has been performed in many educational institutions in online classes and also in-class tuition and successful results have been achieved. (Walker, Brooks & Baepler 2011) revealed that students taught in a new learning space outperformed those taught in the traditional classroom.

Furthermore, there is a significant difference before and after the implementation by means of motivation towards the English foreign language classes. It has been found that a significant difference in motivation towards English classes is available at the subjects attending English classes in blended learning environments before and after the experiment. It is also supported by Byers et al. (2014) that new spaces not only impacts students attitudes, level of engagement and learning experience but also lead to better academic performance.

eBelajar, Learning Management System used in STIKI Malang was a part of supported tool during the research. The students' perception may vary at the

beginning of combining face-to-face teaching and online learning by using ICT, eBelajar for instance. However, students understanding of media used during the teaching learning become part of necessary thing in implementing this strategy.

Conclusion

The new environment of teaching learning, blended learning enriched with face to face and online activities offers students a wide variety of discussion, exploring opportunities in their learning experiences. The opportunities of blended learning environment and its steps have to be designed in the eye of blended learning supplements and constraints, and the instructor and the learner have to carry through their tasks and responsibilities.

The research aim to determine the students' behavior effects of blended learning environment on the academic success in English language classes as well as their motivation in attending the new learning environment. It showed that the students attending in blended learning environment have more success and higher motivation as evaluated in pretest and posttest and supported by and interviews.

Then, even the result of implementation blending learning showed the good impact both students' behavior and motivation, these are the suggestion may be made for consideration in the future research. It is expected that the students are invited actively during the teaching learning through blended learning. The teachers may not only the center of source material but also invite the students to find out their interesting material related to the topic. It will be a challenging method use and of course in the higher level and different study program. It is also suggested that the teachers and students can use blended learning for others subjects in order to make the teaching learning process more alive and make the students feel enjoy in joining the learning processes.

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Lampiran 3. Dokumentasi

Metode tatap muka



Metode online

A screenshot of an online learning interface. The top section is titled "Topic 1 Computer User" and includes a "Hidden from students" button. Below this is a colorful graphic with the text "1. COMPUTER USERS". The interface includes a "Digital Age" section with a question: "Do you know the meaning of digital age? Could you give the example of digital age to your life? Please share your opinion here!". There is also a "Reading Passage" section with a "Good job!" message and a note: "You have very good opinions above. How about you submitting on the discussion task and send your...". The bottom section is titled "Narrative Text" and includes a "Language Features (Review)" section. A video player is visible, showing a slide titled "Time for Learning Narrative Text" with a list of steps: 1. Definition, 2. Generic Structure, 3. Story Sample, 4. Analyzing Structure on the Story. The video player also shows the "English Dive" logo and the text "Past Perfect vs past simple" with a play button icon.

Lampiran 4. Isian Data Kinerja Penelitian

| DATA PENELITIAN | |
|-------------------|---|
| Judul Penelitian | Metode Blended Learning pada Pembelajaran Bahasa Inggris |
| Jenis Penelitian | <input type="checkbox"/> Penelitian Dasar <input type="checkbox"/> Penelitian terapan <input checked="" type="checkbox"/> Pengembangan Eksperimental |
| Bidang Penelitian | <input type="checkbox"/> Natural Science <ul style="list-style-type: none"> <input type="checkbox"/> Mathematical Sciences <input type="checkbox"/> Physical Sciences <input type="checkbox"/> Chemical Sciences <input type="checkbox"/> Earth Sciences <input type="checkbox"/> Biological Sciences <input type="checkbox"/> Information, Computing, and Communication Sciences <input type="checkbox"/> Other Natural Sciences |
| | <input type="checkbox"/> Engineering Technology <ul style="list-style-type: none"> <input type="checkbox"/> Industrial Biotechnology and Food Sciences <input type="checkbox"/> Aerospace Engineering <input type="checkbox"/> Manufacturing Engineering <input type="checkbox"/> Automotive Engineering <input type="checkbox"/> Mechanical and Industrial Engineering <input type="checkbox"/> Chemical Engineering <input type="checkbox"/> Resources Engineering <input type="checkbox"/> Civil Engineering <input type="checkbox"/> Electrical and Electronic Engineering <input type="checkbox"/> Geomatics Engineering <input type="checkbox"/> Environmental Engineering <input type="checkbox"/> Maritime Engineering <input type="checkbox"/> Metallurgy <input type="checkbox"/> Materials Engineering <input type="checkbox"/> Biomedical Engineering <input type="checkbox"/> Computer Hardware <input type="checkbox"/> Communications Technologies <input type="checkbox"/> Interdisciplinary Engineering <input type="checkbox"/> Other Engineering and Technology |
| | <input type="checkbox"/> Agricultural and Environmental Sciences <ul style="list-style-type: none"> <input type="checkbox"/> Agricultural and Veterinary Sciences <input type="checkbox"/> Environmental Sciences <input type="checkbox"/> Architecture Urban Environment and Building <input type="checkbox"/> Other Agricultural and Environmental Sciences |
| | <input type="checkbox"/> Medical Sciences <ul style="list-style-type: none"> <input type="checkbox"/> Medical Sciences <input type="checkbox"/> Public Health and Health Services <input type="checkbox"/> Other Medical and Health Sciences |
| | <input type="checkbox"/> Social Sciences <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Education <input type="checkbox"/> Economics <input type="checkbox"/> Commerce, Management, Tourism and Services <input type="checkbox"/> Policy and Political Sciences <input type="checkbox"/> Studies in Human Society <input type="checkbox"/> Behavioral and Cognitive Sciences <input type="checkbox"/> Law, Justice, and Law Enforcement <input type="checkbox"/> Journalism, Librarianship and Curatorial Studies <input type="checkbox"/> Other Social Sciences |
| | <input type="checkbox"/> Humanities <ul style="list-style-type: none"> <input type="checkbox"/> The Arts |

| | | |
|-----------------------|--|---|
| | | <input type="checkbox"/> Language and Culture <input type="checkbox"/> History and Archeology <input type="checkbox"/> Philosophy and Religion <input type="checkbox"/> Other Humanities |
| Tujuan Sosial Ekonomi | <input type="checkbox"/> Defense | <input type="checkbox"/> Military and Politics <input type="checkbox"/> Military Technology <input type="checkbox"/> Military Doctrine, Education, and Training <input type="checkbox"/> Military Capabilities <input type="checkbox"/> Police and Internal Security |
| | <input type="checkbox"/> Plant Production and Plant Primary Products | <input type="checkbox"/> Field crops <input type="checkbox"/> Plantation crops <input type="checkbox"/> Horticultural crops <input type="checkbox"/> Forestry <input type="checkbox"/> Primary products from plants <input type="checkbox"/> By-products utilization <input type="checkbox"/> Herbs, Spices and Medicinal Plants <input type="checkbox"/> Other plant production and plant primary products not elsewhere classified |
| | <input type="checkbox"/> Animal Production and Animal Primary Products | <input type="checkbox"/> Livestock <input type="checkbox"/> Pasture, browse and fodder crops <input type="checkbox"/> Fisheries products <input type="checkbox"/> Primary & by-products from animals <input type="checkbox"/> Other animal production and animal primary products not elsewhere classified |
| | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Exploration <input type="checkbox"/> Primary mining and extraction processes <input type="checkbox"/> First stage treatment of ores and minerals <input type="checkbox"/> Prevention and Treatment of Pollution <input type="checkbox"/> Other mineral resources (excluding energy) not elsewhere classified |
| | <input type="checkbox"/> Energy Resources | <input type="checkbox"/> Exploration <input type="checkbox"/> Mining and extraction <input type="checkbox"/> Preparation and supply of energy source materials <input type="checkbox"/> Non-conventional energy resources <input type="checkbox"/> Nuclear Energy <input type="checkbox"/> Other energy resources not elsewhere classified |
| | <input type="checkbox"/> Energy Supply | <input type="checkbox"/> Energy transformation <input type="checkbox"/> Renewable energy <input type="checkbox"/> Energy distribution <input type="checkbox"/> Energy Conservation and efficiency <input type="checkbox"/> Energy issues <input type="checkbox"/> Other energy supply not elsewhere classified |
| | <input type="checkbox"/> Manufacturing | <input type="checkbox"/> Processed food products and beverages <input type="checkbox"/> Fiber processing and textiles, footwear and leather products <input type="checkbox"/> Wood, wood products and paper <input type="checkbox"/> Human pharmaceutical products <input type="checkbox"/> Veterinary pharmaceutical products <input type="checkbox"/> Agricultural chemicals <input type="checkbox"/> Industrial chemicals and related products <input type="checkbox"/> Basic metal products (including smelting) |

| | |
|---|--|
| | <input type="checkbox"/> Industrial mineral products <input type="checkbox"/> Fabricated metal products <input type="checkbox"/> Transport equipment <input type="checkbox"/> Computer hardware and electronic equipment <input type="checkbox"/> Communication equipment <input type="checkbox"/> Instrumentation <input type="checkbox"/> Machinery and equipment <input type="checkbox"/> Latex product industry <input type="checkbox"/> Standard supporting technologies <input type="checkbox"/> Materials performance and processes/analysis <input type="checkbox"/> Milling and process materials <input type="checkbox"/> Synthesis and design of fine and specialty chemicals <input type="checkbox"/> Consumer Products <input type="checkbox"/> Other manufactured products not elsewhere classified |
| <input type="checkbox"/> Construction | <input type="checkbox"/> Planning <input type="checkbox"/> Design <input type="checkbox"/> Construction processes <input type="checkbox"/> Building management and services <input type="checkbox"/> Other construction not elsewhere classified |
| <input type="checkbox"/> Transport | <input type="checkbox"/> Ground transport <input type="checkbox"/> Water transport <input type="checkbox"/> Air & space transport <input type="checkbox"/> Other transport not elsewhere classified |
| <input type="checkbox"/> Information and Communication Services | <input type="checkbox"/> Computer software and services <input type="checkbox"/> Information services (including library) <input type="checkbox"/> Communication services <input type="checkbox"/> Geoinformation Services <input type="checkbox"/> Other information and communication not elsewhere classified |
| <input type="checkbox"/> Commercial Services | <input type="checkbox"/> Electricity, gas and water services and utilities <input type="checkbox"/> Waste management and recycling <input type="checkbox"/> Wholesale and retail trade <input type="checkbox"/> Finance, property and business services <input type="checkbox"/> Tourism <input type="checkbox"/> Other commercial services not elsewhere classified |
| <input type="checkbox"/> Economic Framework | <input type="checkbox"/> Macroeconomics issues <input type="checkbox"/> Microeconomics issues <input type="checkbox"/> International trade issues <input type="checkbox"/> Management and productivity issues <input type="checkbox"/> Measurement standards and calibration services <input type="checkbox"/> Commercialization <input type="checkbox"/> Socio-economic development <input type="checkbox"/> Economic development and environment <input type="checkbox"/> Human resource management <input type="checkbox"/> Other economic issues not elsewhere classified |
| <input type="checkbox"/> Natural resources | <input type="checkbox"/> Soil resources <input type="checkbox"/> Water resources <input type="checkbox"/> Biodiversity <input type="checkbox"/> Bioactive product <input type="checkbox"/> Industrial raw materials <input type="checkbox"/> Mineral resource |

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| | <input type="checkbox"/> Other natural resources not elsewhere classified |
| <input type="checkbox"/> Health | <input type="checkbox"/> Clinical (organs, diseases and conditions) <input type="checkbox"/> Public health <input type="checkbox"/> Health and support services <input type="checkbox"/> Other health not elsewhere classified |
| <input type="checkbox"/> Education and training | <input type="checkbox"/> Early childhood and primary education <input type="checkbox"/> Secondary education <input type="checkbox"/> Tertiary education <input type="checkbox"/> Technical and further education |
| | <input type="checkbox"/> Special education <input type="checkbox"/> Computer base teaching and learning <input type="checkbox"/> Education policy <input checked="" type="checkbox"/> Teaching <input type="checkbox"/> Educational administration <input type="checkbox"/> Other education and training not elsewhere classified |
| <input type="checkbox"/> Social development and Community services | <input type="checkbox"/> Community services <input type="checkbox"/> Public services <input type="checkbox"/> Art, sport and recreation <input type="checkbox"/> International relations <input type="checkbox"/> Ethical issues <input type="checkbox"/> Nation building <input type="checkbox"/> Urban issues <input type="checkbox"/> Other social development and community services not elsewhere classified |
| <input type="checkbox"/> Environmental Knowledge | <input type="checkbox"/> Climate and atmosphere <input type="checkbox"/> Ocean <input type="checkbox"/> Water <input type="checkbox"/> Land <input type="checkbox"/> Nature conservation <input type="checkbox"/> Social environment <input type="checkbox"/> River and Lake <input type="checkbox"/> Other environmental knowledge not elsewhere classified |
| <input type="checkbox"/> Environmental aspects of development | <input type="checkbox"/> Plant production and plant primary products (including forestry) <input type="checkbox"/> Animal production and animal primary products (including fishing) <input type="checkbox"/> Mineral resources (excluding energy) <input type="checkbox"/> Energy resources <input type="checkbox"/> Energy supply <input type="checkbox"/> Manufacturing <input type="checkbox"/> Construction <input type="checkbox"/> Transport <input type="checkbox"/> Information and communication services <input type="checkbox"/> Commercial services <input type="checkbox"/> Environmental economic framework <input type="checkbox"/> Other environmental of development not elsewhere classified |
| <input type="checkbox"/> Environmental management & other aspects | <input type="checkbox"/> Environmental management <input type="checkbox"/> Waste management and recycling <input type="checkbox"/> Climate and Weather |

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| | | <input type="checkbox"/> Atmosphere (Excl. Climate and Weather) <input type="checkbox"/> Marine and Coastal Environment <input type="checkbox"/> Fresh water and Estuarine Environment <input type="checkbox"/> Urban and Industrial Environment <input type="checkbox"/> Forest and Wooded Lands <input type="checkbox"/> Mining Environment <input type="checkbox"/> Other environmental aspects not elsewhere classified |
| | <input type="checkbox"/> Advancement of Natural sciences, technology, and engineering | <input type="checkbox"/> Mathematical science <input type="checkbox"/> Physical sciences <input type="checkbox"/> Chemical sciences <input type="checkbox"/> Earth sciences <input type="checkbox"/> Information, computer and communication technologies <input type="checkbox"/> Applied sciences and technologies <input type="checkbox"/> Engineering sciences <input type="checkbox"/> Biological sciences <input type="checkbox"/> Agricultural sciences <input type="checkbox"/> Medical and health sciences <input type="checkbox"/> Multimedia <input type="checkbox"/> Other Natural sciences, technology, and engineering not elsewhere classified |
| | <input type="checkbox"/> Advancement of Social sciences and humanities | <input type="checkbox"/> Social sciences <input type="checkbox"/> Humanities <input type="checkbox"/> Cyber law <input type="checkbox"/> Other Social sciences and humanities not elsewhere classified |
| Sumber Dana | <input checked="" type="checkbox"/> Dalam negeri <input type="checkbox"/> Luar negeri/Asing | |
| Institusi Sumber Dana | <input type="checkbox"/> Pemerintah <input type="checkbox"/> Swasta/industri <input type="checkbox"/> Lembaga multilateral <input type="checkbox"/> Lembaga nirlaba <input type="checkbox"/> Internal perguruan tinggi <input checked="" type="checkbox"/> Pribadi peneliti <input type="checkbox"/> Sumber dana lain | |
| Jumlah Dana | Rp. 500.000 | |
| Personil Dosen | NIDN : Nama Dosen : Program Studi : | |
| Personil Non Dosen | Nama : Institusi : | |