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The Effectiveness of Mentoring and Coaching in Teaching Business Planning
The Case of Universitas Andalas

Donard Games

Business plan course has become an essential part of entrepreneurship education in entrepreneurial universities. Universities nowadays are required to showcase their entrepreneurial spirit as a way to adapt to current trends and public demands. Therefore, it is important for universities to work together...

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Problem Based-Learning: Method of Enhancing and Encouraging the Motivation of English Department Students at English Pragmatics Class

Ike Revita, Resshie Andriani, Farah Anindya Zalfikhe, Rovica Trioclarise

Problem-based learning (PBL) is one of the teaching methods implemented at Universitas Andalas to achieve the objectives of teaching and accelerate the teaching and learning process. PBL is considered suitable to encourage students to be more active in the class. This article reports research on the...

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The Implementation of Blended Learning as the Alternative of Learning Process in Pragmatics Class at English Department Universitas Andalas

Ike Revita, Dhiant Asri

Blended-learning is a learning strategy in which the class activities are carried out by combining technology-based learning and information that is done online with classroom-based or face-to-face learning. Traditionally, the learning process is done in the classroom, even in the era of 4.0 where every...

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Constructive Learning to Increase the Integration of Students' Knowledge and Skills in the Numerical Methods Subject

Susila Bahri, Budi Rudianto

Constructive learning is applied to Numerical Method lectures. The lecture is held online using Zoom Meeting. The day before lectures begin, the lecturer provides lecture materials, some examples of cases and solutions. In order to encourage activity and improve student skills, some real cases were also...

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The Application of the Two Stay Two Stray Learning Model and Co-Op Co-Op for the Improvement of Students' Learning Outcome in the Environmental Epidemiology Subject

Taufiq Ihsan, Tivany Edwin

This study aimed to determine the improvement of the Environmental Epidemiology Subject's learning outcomes through Two Stay Two Stray (TSTS) and Co-op Co-op learning model strategy. This study was a classroom action research and compared the scores in the semester of the academic year 2018/2019 (conventional...

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Enhancing Student's Understanding in Feasible Study Subject by Using Blended Learning Methods (Mind Mapping, Project Based Learning and Coursera)

Winny Alna Marlina, Devi Yulia Rahmi, Rizki Antoni

Business Feasibility Study is a mandatory subject that students learn in Management Department to determine a business feasibility. Teaching method in Business Feasibility Study use Student Centred Learning. The result of this method shows that students grades are below average. The aim of this research...

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The Implementation of Blended Learning on Introduction to Accounting 1 Subject

Rita Rahayu, Indah Permata Suryani, Efa Yonnedi

This study aims to evaluate implementing a blended learning method on the Introduction to Accounting 1 subject. Blended Semester Learning Plan (SLP) has been developed and implemented on this subject since September 2020. Three indicators were used to evaluate the implementation of blended learning on...

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Blended Learning Methods (Youtube, I-Learn, Zoom Application) in Operation Research Subject

Winny Alna Marlina, Devi Yulia Rahmi, Rizki Antoni

Operations Research is a compulsory subject in Management Department, Faculty of Economics of University Andalas. During Covid-19, the teaching

methods migrated online through the used of applications such as Youtube, Zoom and Whatsapp. The aim of this research is to know the best application according...

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Undergraduate Medical Students' Perspective of Online Lecture

Indah Puspasari Kiay Demak, Nur Syamsi, Andi Alfia Muthmainnah Tanra

Online lectures provide easier and more effective access, a wider amount of information, autonomy and reflective thinking, and flexibility. This study aims to assess medical students' perspectives on the online lecture. It is a descriptive observational study that was conducted from March to June 2019....

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Blended Learning: Impact on Student Motivation and Understanding

Inda Mustika Permata, Bima Jon Nanda

Blended learning is a combination of learning or a combination of face-to-face and online learning elements in a coherent manner. This method can be a solution to the impact of a pandemic on lectures. Therefore, this paper seeks to describe the impact of using the blended learning method on student motivation...

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Digitizing and Evaluating Quality Assurance Documents at English Department, Faculty of Humanities

Novalinda, Marliza Yeni

This study aims to determine the level of satisfaction and effectiveness of digitizing quality assurance instruments such as the online form for thesis registration, proposal registration form, templates of some forms in English Department, Faculty of Humanities, Andalas University. The survey was conducted...

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Small-Group Presentation as Medium for Students to Practise Analyzing Literary Works

Rima Devi, Rachmidian Rahayu, Aulia Rahman

Analyzing literature work using literary theory for students in the Undergraduate Program of Japanese Studies, Universitas Andalas has not become prevalent. Students still focus on the subject related to Japanese language skills, which is an absolute requirement to graduate and hold a bachelor's degree....

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Student's Soft Skills Enhancement Through FBS Foreign Exchange Trading Online Simulation

Rayna Kartika, Annisaa Rahman

Foreign exchange trading using hedging methods is one of the core topic in International Financial Management which is one of selective subjects in Accounting Department, Universitas Andalas. During this pandemic Covid-19, the class is conducted through online learning and as the consequences of the...

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A Thematic Analysis: How Can Online Learning Systems Boost Students Moods?

Rayna Kartika, Annisaa Rahman

The pandemic Covid-19 has changed the way of learning from face to face meeting to online classes. As a consequence, the form of long-distance learning in this situation has given significant impacts on learning methods particularly to students and teachers. This research aims to investigate the factors...

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Small Group Discussion and Discovery Learning in Indonesian

Course Learning

Leni Syafyahya, Efri Yades

The Indonesian language learning method used so far will be developed in a better direction. The application of the small group discussion method, in which student learning will be formed in small groups. The lecturer provides discussion topics that will be discussed by each group. In addition, discovery...

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Problems and Challenges of Online Lectures in Indonesia During the Pandemic COVID-19

Sonezza Ladyanna, Aslinda

The impact of the Covid19 pandemic on education is forcing lectures to be carried out online. The purpose of this article is to explain the problems and challenges of online lectures in Indonesia at the beginning of the Covid19 pandemic. Sources of data in this study were Undergraduate students of Andalas...

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Strategies for Improving Basic Japanese Grammar Skills Through Acrostic Techniques

Lady Diana Yusri, Idrus

This article is about using acrostic techniques to improve understanding of basic Japanese grammar. This research focuses more on changing the form of

...te in Japanese. The subjects of this study were 40 students taking The Introductory Japanese Language course. The implementation of this learning model...

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Development of Kampus Merdeka-Merdeka Belajar Method for the Sejarah Indonesia Kontemporer Course Through Student Independent Project: A Research Report

Yudhi Andoni, Wannofri Samry

The focus of this research is the experience of students taking contemporary Indonesian history courses with the independent project method to see if the method is an effective, efficient, and inspirational way of learning for students in the context of developing Kampus Merdeka-Merdeka Belajar at the...

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Indirect Assessment of Program Student Outcomes Through Student's Learning Experiences at the Faculty of Engineering

Dedison Gasni, Haznam Putra

This paper is to investigate the relationship between the learning experiences of students and achieving program student outcomes (PSOs) based on ABET Accreditation of undergraduate study programs at the Faculty of Engineering Universitas Andalas. A questionnaire consisted of seven PSOs, which represent...

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Intermestic Approach Implementation in International Regime Learning Process through Group Investigation Cooperative Model

Anita Afriani Sinulingga, Putiviola Elian Nasir

The purpose of this article is to describe students' learning outcomes after the development of group investigation type, cooperative learning method, in the International Regime course. The application of this method through intermestic approach is expected to contribute to the image of international...

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Blended Learning Model Development in Conflict Management and Resolution Course

Anita Afriani Sinulingga, Putiviola Elian Nasir

The purpose of this study is to describe the application of the blended learning model in the Conflict Management and Resolution course. Through the application of this method, it is hoped that the findings will be in the form of an analysis of the effectiveness of blended learning. The focus of learning...

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From Conventional to Blended Learning: Learning Technology Development for Plant Pest Science Course

My Syahrawati, Yunisman

Plant Pest Science is a compulsory course of the Plant Protection Department, Faculty of Agriculture, Universitas Andalas. In the previous year, we teach students conventionally, standing in front of a class, and interact each other in the same place. This semester, we prepared the blended learning class...

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Medical Students Perception About Implementation of Video-Assisted Blended Learning in Ophthalmology Clinical Clerkship During COVID-19 Pandemic Period

Hendriati, Muhammad Syauqie

The COVID-19 pandemic has disrupted teaching in a variety of institutions, especially in medical schools. Electronic learning (e-learning) became the core method of teaching the curriculum during the pandemic. This study explores the clerkship medical student's perspective toward the e-learning method...

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The Impact of Formative Assessment on Students' Academic Achievement

A Case Study of English Students of Faculty of Humanities, Andalas University, Padang, Indonesia

Ferdinal, Isramirawati

This study identified the effect of formative assessment on a group of Indonesian students undertaking the class "Introduction to Australian Culture." The study also attempts to identify the students' perceptions and attitudes towards applying this type of assessment in the class. This eight-week study...

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Applying Self-Directed Learning Method in Augmenting Student's Competence and Motivation in Entrepreneurship Class at English Department of Universitas Andalas

Dhiant Asri, Shilva Lioni

The aim of this course is to augment student's mindsets, attitudes and personalities in order to be creative and innovative in entrepreneurship. Students were trained to plan, start and manage a new business. In this case, Self-Directed Learning (SDL) method was applied in the entrepreneurship course....

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Redesign of the Curriculum for Improvement of Graduates and Lecture Career of the Animal Science Study Program

Khalil, Adrizal

The challenges facing the animal science study program of Campus II

Payakumbuh in implementing the learning process were poor knowledge and skills of students and graduates. The academic grades did not reflect the actual skills needed to work in the livestock areas. This research redesigned the curriculum...

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Improving Students English Vocabulary Using Kahoot!

Ayumi, Al Maghvirah Chan

Acquiring vocabulary is compulsory for students to apply them later in their university year when writing their thesis. The combination of traditional and interactive to enhance student's vocabulary can show a significant result. This article aims to see how Kahoot! contributes to students' vocabulary...

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Cooperative Model Type STAD and Its Effect on Student Learning Outcomes at Sustainability Accounting Courses

Asniati Bahari, Elvira Luthan, Winda Azmi, Alya Ledias Anshar

This study aims to determine the Student Teams Achievement Division (STAD) cooperative learning model's effect on student learning outcomes in sustainability accounting courses. This research is a quasi-experimental study involving two groups of students at Andalas University with a total sample of 47...

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Application of Blended Learning Model to Increase Motivation and Student Learning Outcomes in Accounting Theory Subjects at Fekon Unand

Elvira Luthan, Fauzan Misra, Luciana Luthan

This research is a comparative descriptive study which aims to determine the effect of the application of blended learning on student achievement in the Accounting Theory course. The form of research used is quasi-experimental, namely by trying out a treatment. The characteristic of experimental research...

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Learning Technology Development Through Podcasts for Auditory Learning Styles

Berri Brilliant Albar, Indah Maya Sari

Students have a variety of learning styles, with most of them being auditory learners. Auditory learners need at least a sound learning tool, while the available tools are written in a more visual form. Audio podcasts are a solution for auditory learners to understand and improve their understanding...

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Medical Student's Perception of Online Learning in Tadulako University During COVID-19 Pandemic

David Pakaya, Vera Diana Towidjojo, Indah Puspasari Kiay Demak

The online system applied during this pandemic changes the interaction pattern between lecturers and students and will affect the learning environment. Therefore, researchers are interested in knowing students' perceptions while participating in online culture in terms of their interactions and learning...

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The Development of Student Satisfaction Assessment Instrument Towards Academic Service in Mathematics Department, Andalas University

Hazmira Yozza, HG Izzati Rahmi, Monika Rianti Helmi

The Mathematics Department, Andalas University need to provide good service to ensure their students satisfaction toward academic services. This study aims to design an instruments to assess student satisfaction related to the quality of academic services and to analyze student satisfaction toward the...

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Examination of Business Student's Satisfaction to Use E-Learning; Empirical Study during Covid 19-Pandemic in Universitas Andalas

Yulia Hendri Yeni, Vera Pujani

This study examines the influence of Ease of Use and Attitude toward Students' Satisfaction to Use e-learning. Four hypotheses are proposed to investigate the linkage of three variables. Data were collected by using Google form. One hundred thirty-five students of the Accounting and Management Study...

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The Application of the Blended Learning Method to Achieve Independent Learning in Nursing Communication Course

Yulastri Arif, Esthika Ariany Maisa, Feri Fernandes, Rika Sarfika

Blended learning is proven to be able to increase learning independence in the Nursing communication course which is observed through classroom action research. Student learning independence in cycle one is quite good with an average score of 81.14, and it increases to 92.94 in cycle two so that it becomes...

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Teaching English Through the Medical or Healthcare Process and the Role Play for the Students of the Faculty of Medicine,

Andalas University

Ayendi, Eva Najma

This research is to see the extent to which teaching English through medical/healthcare and roleplay can improve the interpersonal speaking skills of Andalas University of medicine undergraduate students in the odd semester 2019/2020. This classroom action research was conducted in two cycles. The finding...

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Medical Undergraduate Students Response of Learning Process Using Drawing and Animation Videos

Aisyah Elliyanti, Dian Pertiwi

This study aimed to determine students' perceptions of understanding learning material using the drawing method. Ten undergraduate medical students participated in creating cardiovascular material based on their topic of discussion. The materials convert to animation videos. Thirty-eight students participate...

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How to Improve Student's Creativity in Learning Japanese Language Using Numbered Head Together Method (NHT)

Adrianis

This article describes the empirical experience of researchers in teaching

Chukyu Nihongo II with face-to- face and online teaching. Using descriptive qualitative methods with purpose to determine the creativity of students, and to know the system in expressing ideas, asking questions and respect other's...

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Types of Word That Are Frequently as Gairaigo Words in Japanese From English

Adrianis, Dhiant Asri

The writing of this paper is a description of the Japanese gairaigo contained in the children's story 白雪姫(ShirayukiHime). Gairaigo is a loan word taken from a foreign language. This study is a morphological study that discusses the word, the data is taken from the children's story 白雪姫 (ShirayukiHime),...

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Cooperative Learning Method for Improving Learning-Outcome in Digital Signal Processing Course

Rudy Fernandez, Mumuh Muharram

Digital Signal Processing (DSP) is a mandatory course for students of the Electrical Engineering Department in Universitas Andalas. The course is to provide an understanding of concepts of digital signal processing as well as its application. Teacher-centred Learning was used to deliver the course materials,...

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Development of Online Learning Video for Blended Learning in Teletraffic Course

Rudy Fernandez, Eka Putra Waldi

Teletraffic is an optional course for students of the Electrical Engineering Department in Universitas Andalas. The course used to delivered in offline learning mode and now is developed to be in blended learning mode. This article is aimed at describing the development of learning videos as a media...

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Implementation of Project Based Learning Method with Speech Analyzer App for Oninron Course

Dini Maulia, Darni Enzimar Putri, Rahtu Nila Sepni

Oninron Subject is compulsory for second-semester university students majoring in Japanese language and literature at Andalas University. This subject is categorized as specific linguistic course that discusses the theory of sound in language. This paper focuses on the implementation of Project Based...

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Long-Distance Online Learning During Pandemic: The Role of Communication, Working in Group, and Self- Directed Learning in Developing Student's Confidence

Fauzan Misra, Ihsani Mazelfi

The Covid-19 pandemic resulted in the learning process being carried out online, even on campuses with face-to-face traditions such as Andalas University. Although Unand has initiated the development of blended-learning, compulsory implementation of online learning is a challenge for lecturers and students....

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The Implementation of OBE-Based Management Accounting Learning

Riwayadi, Denny Yohana

This research aims to evaluate the effectiveness of the implementation of OBE-based management accounting learning. The research type is applied research. The population is the students who are taking management accounting courses This research uses census sampling. It is found that OBE-based learning...

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The Effectiveness of Online Learning on Student Practicum Skills

Ulfa Farrah Lisa, Feni Andriani, Dian Ahzaliza

The learning method is one of the supporting techniques for the achievement of graduate competencies. One of the ways is e-learning, which is called online lectures. The research objective is to determine the effectiveness of online learning on student practicum skills. This type of research is a quasi-experiment...

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Development of Evaluation Instruments for Learning Midwifery Skills; E-Learning Based Rubric

Ulfa Farrah Lisa, Feni Andriani

Assessment using rubrics can assess students' cognitive, affective, and psychomotor domains when performing midwifery skills. Evaluation instrument analysis software has been developed a lot developed by Andalas University, namely, through web e-learning. The research objective was to produce an evaluation...

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Developing Learnability of Disaster Epidemiology and Emergency Response Subject Through Whatsapp and Google Classrooms

Yessy Markolinda, Syafrawati, Sawirman

This article discusses the subject development of Disaster epidemiology and

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WhatsApp: How it is Used to Support the Blended Learning in Linguistics and Research Classes in the Pandemic-Era Classroom

Sawirman

In the new global classrooms, WhatsApp mobile application has become a central issue for the learning process. This paper attempts to show how WhatsApp Group (WAG) can support blended learning in linguistics and research classes. A qualitative case study was used. The data were drawn from 85 individuals,...

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The Use of Moodle Learning Management System to Extend Discourse Class and Research During the Covid-19 Pandemic

Sawirman

Moodle Learning Management System (LMS) makes teaching more interesting and effective. The article proposes 12 steps as a framework to use Moodle Learning Management System (LMS) and Interactive Learning (Ilearn) of Universitas Andalas to extend discourse class and research during

the Covid-19 pandemic....

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Video as a Tool in Improving Pharmacy Student's Knowledge

and Skills About Tonicity

Uswatul Hasanah, Lili Fitriani, Erizal Zaini

The COVID-19 pandemic has transformed in-class courses into the online class. A web-conference software program was mostly used to deliver the learning activity. But this method was ineffective due to lack of cognitive engagement. This study aims to improve students' ability to solve the tonicity problems...

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Development of Student Centre Learning Methods in Block 4.3 (Elective) Through Student Exchange as Innovative Learning

Rika Susanti, Rahmat Syawqi

Learning on block 4.3 gives students the opportunity to understand concepts: Sports medicine, Hospital management, Biotechnology and biomolecular, Tradisonal cuisine minang, Article writing, Traditional medicine, Clinical management, Interactive learning design. The contribution of this block to the...

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Development and Implementation of Blended Learning (PPBL) in Block 3B. Midwifery Care During Childbirth

Yulizawati, Miranie Safaringga

Block 3.B, which is entitled Midwifery Care for normal delivery, is the second block that must be studied by third semester students in the Undergraduate Program of Midwifery, Faculty of Medicine, Andalas University. This study uses a comparative study. Bivariate analysis was categorical correlative...

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Evaluation of Preceptorship Implementation Process and Application of the Philosophy of Midwifery in the Cycle III

(Midwifery Care for Physiological Delivery) at the Midwifery Independent Clinic (PMB) at the Clerkship of the Midwifery Professional Education

Lusiana El Sinta Bustami, Erda Mutiara Halida

One of the ways to develop the quality of clinical learning is by applying suitable preceptorship methods. So far, the implementation of clinical learning activities still needs special attention. Clinical learning methods have not been implemented optimally. Some of the problems that still occur in...

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Development of Learning Methods for Student Center Learning with Problem Based Learning Through Blended Learning in Block 6.C Infection and Neoplasms of the Reproductive and Breast System

Yulizawati, Miranie Safaringga

Achievement of the learning objectives of a student with the method of learning problem based learning (PBL), can be influenced by the results of extracting their peer information in small groups because the information obtained by students will be discussed to perfect the knowledge gained. This study...

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The Effectiveness of Video Presentation Techniques on Learning of Security Studies Concepts in International Relations Department of Universitas Andalas Indonesia

Zulkifli Harza, Maryam Jamilah

Security study is one main course in the international relations discipline because it consists of an important conceptual framework that is crucial in understanding the relationship between states and global politics. Previous learning method which has applied to this course demand domination of lecturers...

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Blended Learning in Financial Management 1

Denny Yohana, Dian Yuni Anggraini

Blended learning is a combination of conventional learning models usually done directly with e-learning internet network-based learning models. This method provides several conveniences in the teaching and learning process, both process and materials. It is hoped that this method can improve student...

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Implementation of Problem-Based Learning (PBL) in Gender and Agribusiness Development Course and Its Impact on Students' Learning Process

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Yuerlita, Rudi Febriamansyah, Vonny Indah Mutiara

Problem-based learning (PBL) is one of the widely implemented active learning method. This study aims to describe implementation of PBL, analyse the effect of PBL in teaching and learning and describe students' satisfaction in gender and agribusiness development course, undergraduate level. This study...

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Implementation of the Project Based Learning Method in the Digital System Course Based on IlearnUnand

Darwison, Syukri Yunus, Syarkawi Syamsuddin, Mumuh Muharam, Darmawan

The rapid development of science today requires the application and innovation of online technology in the teaching and learning process.UnandIlearn is used as a data center and activities both online and offline for digital systems courses.By applying the Project Based Learning (PjBL) method in these...

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Implementation of Blended Learning-PjBL in the Sensor Course Based on Ilearn Unand

Darwison, Rudy Fernandez, Mumuh Muharam

With the rapid development of science today, it is necessary to apply and

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Development of Project-Based Learning Methods in the Digital System Design Course

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The brief description of the Digital System Design course discusses the basic principles of digital system design, digital system design parameters, analysis and synthesis of combinational and sequential logic circuits, use of state diagrams in digital system design, modeling and simulating systems designs,...

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Blended Learning Development of Non-Communicable Diseases Dietetics Subject

Hafifatul Auliya Rahmy, Azrimaidaliza, Eva Yuniritha, Rifza

The Corona Viruses Diseases outbreak made the government decide that all zones' learning methods must be implemented online. For this reason, it is necessary to change from conventional learning to internet-based learning, one of which is blended learning. Dietetics of non-communicable diseases is one...

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Mixed Assessment Method for Distant Learning: Challenges and Future Works

Rima Novirianthy, Novi Maulina, Marisa, Zulfa Zahra, Ika Waraztuty, Dedy Syahrizal, Maryatun

Online teaching due to pandemic Covid-19 significantly impacted to medical education institution. In this study, we described our first experience of using mixed online student assessment methods in the setting of Covid-19 and evaluated student's perceptions about the examination, as challenges and future...

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Masrilayanti, Febrin Anas Ismail

Nowadays, online learning is a must to be conducted for students because of the Covid-19 pandemic. Lecturers should find a media or a tool to deliver the material to the students, so that they are still able to obtain knowledge and understand the subjects. One of the media widely used for online learning...

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Students Perception to Course Work Effectiveness for Enhancing of Mechanic Subject in Civil Engineering Department Universitas Andalas

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Nefy Puteri Novani, Lathifah Arief

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Hanalde Andre, Amirul Luthfi, Baharuddin, Rizki Wahyu Pratama

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Lala Septiyani Sembiring, Meria Susanti, Nelia Afriyeni, Izzanil Hidayati, Siska Oktari, Yantri Maputra

In optimizing accomplishment for learning outcomes in a subject, it is necessary to do various appropriate method. Especially for courses that have a lot of material content and long study hours, then the blended learning method can be used as an alternative. In this study, the blended learning method...

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Yalmiadi, Yossy Iddris

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Laila Isrona, Rika Susanti

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Elly Delfia, Fadlillah, M. Yunis

Stylistics is one of the compulsory courses in the Indonesian Language Department, Faculty of Humanities, Andalas University. Stylistics is the subjects dual paradigm (literature and linguistics) that needs to be developed because of a lack of interest by the students. The development of this course...

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Student Responses to Learning Using Blended Learning Method: Study of Political Behavior Theory Subject at the Faculty of Social and Political Sciences Andalas University

Asrinaldi, Tengku Rika Valentina

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The Use of PowerApps to Design Archive Management for Internal Quality Standard Audit in Quality Control Group (GKM) of Department of Agricultural Product Technology, Faculty of Agricultural Technology, Andalas University

Purnama Dini Hari, Cesar Welya Refdi

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Applicationof Vlogs in Introductory Ecology Courses

Ryan Budi Setiawan, dan Zulfadly Syarif

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Student's Preferences and Perceptions on Kampus Merdeka Experiential Learning Programs
A Survey in a Private University in Yogyakarta

Yosephine Suharyanti, Lucia Asdra Rudwiarti, Paulus Mudjihartono, Alexander Jatmiko Wibowo

Kampus Merdeka concept of providing work experiences to students is basically an experiential learning approach to support the achievement of

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This study aims to determine the role, main tasks and functions of the Quality Assurance (QA) in the Master of Management study program, Faculty of Economics, Universitas Andalas. The approach used in this research is literature review and the source of the data in this study is secondary data collected...

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Yesi Puspita

The excellent education need evaluation, changes, curriculum development, facilities and infrastructure, good educational management that includes

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Aldina Ayunda Insani, Uliy Iffah

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Midwifery education uses a new paradigm, namely the Problem Based Learning (PBL) method. In connection with the era of the industrial revolution 4.0, technological advances and the situation of the Covid-19 pandemic, a

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Rafika Oktova, Laila Rahmi

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Emeraldy Chatra, Ilham Havifi

The Government Public Relations or G-PR course which is the object of research is a course in the Department of Communication, Andalas University. This course not only provides hard skills and but also soft skills with a combination of theory and practice where the portion of practice is comparable to...

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This study aims to describe the effectiveness of the use of instructional videos for the Earthquake Engineering course in the Civil Engineering Department, Andalas University. The method of making videos is by editing files using Camtasia Studio. Students who are the target of learning are students in...

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This paper discusses the learning process of Elementary Linear algebra using blended learning which is carried out after the midterm exam. Learning is designed initially by providing additional explanation in the form of additional information that is used in such a way for a material. Furthermore, the...

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Tesri Maideliza, Ahmad Taufik, Mansyurdin

Nowadays, information technology (internet) has a major influence on the world of education. The application of various learning media or "blended learning" has been carried out in the Plant Structure and Development course in the Biology Department, Andalas University. In its application, several obstacles...

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Ares Albirru Amsal, Siska Lusia Putri, Febri Rahadi, Mellyna Eka Yan Fitri

Understanding the factors that influence the satisfaction of e-learning is critical. Therefore, this study aims to investigate the relationship between interactive learning, social influence, and perceived usefulness on perceived satisfaction with e-learning. Seventy-three students taking online learning...

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Verinita, John Edwar

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Verinita, Yanti, Ratni Prima Lita

Teaching of Marketing Management 1 courses has been using the method of exposure to marketing management concepts and theories. The lecturer explains the concept or theory in class. The next week the lecturer gave the case and the students discussed the case. The case is determined by the lecturer. So...

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Venny Darlis, Dessy Kurnia Sari

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Venny Darlis, Dian Rani Yolanda, Verinita

In this globalization and internationalization era, a university is required to improve its performance. Likewise, the Management Department of the Faculty of Economics, Andalas University, prepares itself to go global to obtain certification on the quality assessment of a study program that is recognized...

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Dewi Murni, Nelwati, Zifriyanthi Minanda Putri, Esthika Ariany Maisa, Ilfa Khairina, Sidaria, Yuanita Ananda

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Peer tutoring is a flexible, peer-mediated strategy that involves students acting as tutors and academic tutors. The Study Lab tutors serve as guides and mentors to help students become successful independent learners. Tutors support students in developing attitudes, behaviors, and understanding of the...

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Ambuy Sabur, Dadang Saepuloh, Siti Subaidah, Deri Firmansyah

This research aims to analyze the effectiveness of HOTS learning and self efficacy of students on economic literacy, the population of grade XI SMAN 11 Tangerang city as much as 109, sampled using Proportionate Simple Random Sampling through sloven formula so as to be a sample number of 90 students....

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Video as a Tool in Improving Pharmacy Student's Knowledge and Skills About Tonicity

Authors

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Corresponding Author

Uswatul Hasanah

Abstract

The COVID-19 pandemic has transformed in-class courses into the online class. A web-conference software program was mostly used to deliver the learning activity. But this method was ineffective due to lack of cognitive

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engagement. This study aims to improve students' ability to solve the tonicity problems by using videos. Two videos were used as a media to learn tonicity, both theory and the calculation. The students previously studied tonicity by joining the web- conference and took a pre-test to measure the baseline score. Then, the students were free to access the videos for 5 hours and took a post-test. The mean of the total score, theoretical score, and calculation skill score was analysed statistically. The results show a significant increase in the average total score, cognitive score and skill score by 51.38, 35.23, and 71.62%, respectively. In conclusion, the lecturer can use videos as a tool to improve the learning activity.

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Video as a Tool in Improving Pharmacy Student's Knowledge and Skills About Tonicity

Uswatul Hasanah[1*], Lili Fitriani[1], Erizal Zaini[1]

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ABSTRACT

The COVID-19 pandemic has transformed in-class courses into the online class. A web-conference software program was mostly used to deliver the learning activity. But this method was ineffective due to lack of cognitive engagement. This study aims to improve students' ability to solve the tonicity problems by using videos. Two videos were used as a media to learn tonicity, both theory and the calculation. The students previously studied tonicity by joining the web-conference and took a pre-test to measure the baseline score. Then, the students were free to access the videos for 5 hours and took a post-test. The mean of the total score, theoretical score, and calculation skill score was analysed statistically. The results show a significant increase in the average total score, cognitive score and skill score by 51.38, 35.23, and 71.62%, respectively. In conclusion, the lecturer can use videos as a tool to improve the learning activity.

Keywords: pharmacy, pharmaceutical calculation, tonicity, video

1. INTRODUCTION

SARS-CoV-2 started to spread from Wuhan, China, in December 2019 and was rapidly transmitted to several countries until WHO declared that the world is encountering a global health crisis as COVID-19 pandemic. The Indonesian government ordered every citizen to limit physical interaction and keep personal hygiene to prevent COVID-19 infection. To ensure the safety of each person in the institution, most of them implement the work-from-home system. Teaching and learning activities at university must adapt to the new condition due to COVID-19 pandemic since early 2020. Lecturers could not use the conventional learning method applied in the previous semester since it gathered many people in the same room, and it could increase the risk of transmission of the COVID-19. Thus, lecturers held a remote teaching and learning activity on an online platform.

Using technology in teaching and learning activities seem applicable to support and build the student's knowledge and skills, especially in this COVID-19 pandemic [1–5]. Many universities use web conference program to transform the offline teaching format to online format. Butz et.al investigated the students' satisfaction and achievement of online class compared to the opposite form. The data indicated that the web conference based class is not as effective as

conventional in-class activity [6]. Cognitive engagement is one of the aspects that affect the effectiveness of a course. In the transition to the online class, cognitive engagement seems lower than the offline class [7]. The lecturers need to prepare tools that also manageable by the students [7]. Bruggeman reveals that the implementation of blended learning in university is influenced by the teacher's mindset [8]. Teachers' creativity is needed to improve student motivation in online classroom [9,10].

Universitas Andalas provided the online Learning Management System as iLearn (Moodle) that can be accessed by all students and lecturers. This platform offers various activities needed in learning and teaching activity such as learning material file attachment, video embedding, a quiz with several types of question form, SCORM support for an interactive learning process, assignment, and a discussion room. The features are suitable to be used in online courses. In this research, some videos are prepared to support the synchronous session.

Online course contents seem like a promising way to deliver teaching materials included in pharmacy education [11]. Video could be used in improving and enhancing learning activities—for example, a pre-recorded lecture intervention to some courses providing improved skill and student performance in

pharmaceutics, science, and clinical pharmacy [12–17]. For some people, learning calculations require repetition, and a recorded video meets this condition. Due to those research, the optimal video length to disseminate some information is around 18 minutes[13,17–19].

Sterile Dosage Form Technology course contents are about how to produce a good quality of injection and ocular dosage form. One of the course learning outcomes (CLO) is the students are able to analyze the tonicity of formula and solve the tonicity problem. This topic consists of a theory of tonicity and several tonicity calculation method. In the previous year, this particular CLO did not meet the target. Some of the students exhibit low performance in laboratory activity to design a sterile dosage form, especially about the tonicity. The pandemic condition required a limitation in social interaction; therefore, the lecturer could not directly explain and teach the students. This study aims to evaluate the effectiveness of videos intervention in students' performance.

2. EDUCATIONAL ACTIVITY AND SETTING

This research was a quasi-experimental comparative study using pre-test and post-test with two videos about tonicity as the intervention.

Participants are the students of the Undergraduate Pharmacy Study Programme (UPSP) of Universitas Andalas enrolled in the Sterile Dosage Form Technology course (FAF 311) on iLearn (n=134).

The Sterile Dosage Form Technology course is a 14 week course to teach the students how to make a good quality sterile dosage form. One of the contents in this course syllabus is tonicity. Counting the tonicity is the basic skill to do the laboratory practice to calculate an injection or ocular dosage form formula. Thus, the teaching team allocated this module for two weeks.

This research intervention is in the form of videos prepared in 2 different topics, each for theory and tonicity calculation. In the first week, the students learned tonicity by joining the web conference and doing the assignment. The students learn about tonicity directly from the lecturer and self-learning by doing the task. Next week, the pre-test was administered to evaluate the students' skills and knowledge from the previous learning activity. The post-test would be unlocked after students got a grade for the pre-test and watched the videos.

The pre-test and post-test questions were created according to the Sterile Dosage Form Technology course learning outcome. Eight items were designed to

assess the theoretical knowledge and seven questions to evaluate the calculation skill.

The pre-test scores, post-test, theory, and calculation skill scores were analyzed statistically using paired t-test performed in Microsoft Excel 2016 (p<0.05).

3. FINDINGS

Tonicity is a crucial factor in formulating a sterile dosage form. Since most sterile dosage forms would be produced as an injection, a hypotonic or extremely hypertonic formula would affect the body homeostatic. Therefore, a pharmacist, or specifically in this study, an undergraduate pharmacy student, should adjust the formula's tonicity to produce a sterile dosage form. Tonicity of a solution was related to its osmolarity in comparison with body fluid osmolarity, i.e. blood and lacrimal fluid. Tonicity can be calculated by various methods and formulas that used the same variables. Based on the previous class in 2019, those theories and formulas were frequently mixed up by the students, and they cannot give an isotonic formula.
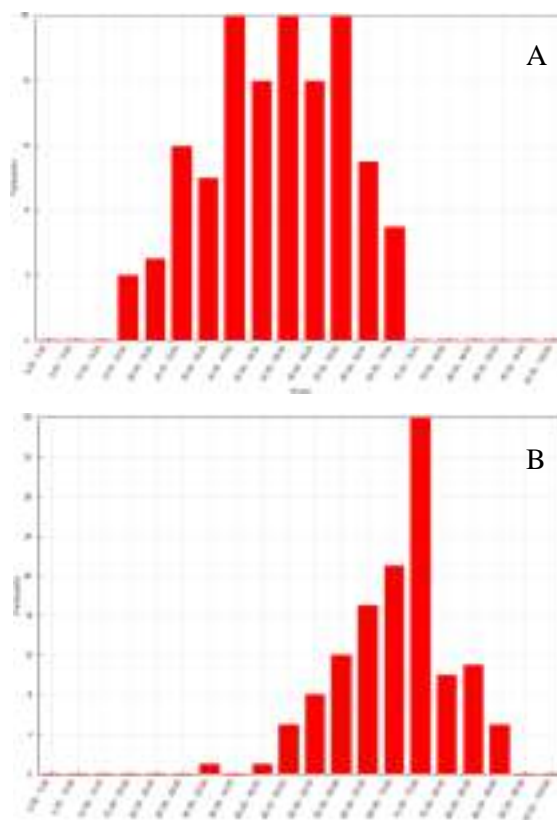

Figure 1. Score distribution of pre-test (A) and post-test (B) with tonicity video intervention (n=134)

As stated in the previous section, this study participants are 134 students of UPSP enrolled in the Sterile Dosage Form course on ilearn. Every test, learning material and

intervention were provided on iLearn. Figure 1 presented the score distribution of the pre-test and post-test. Overall, the score distribution chart showed a normal bell-shaped distribution pattern. The bars are visually seen to be shifting to the right that indicates increasing for the post-test result.

Table 1. Score of pre-test and post-test with video

Score Criteria	Mean	SD*	Min	Max	Paired t-test
Pretest (n=15)	44.82	12.43	18.89	69.44	1.2×10^{-40}
Post-test (n=15)	67.85	10.05	31.67	87.78	
Theory questions (n=8) - Pretest	25.44	8.55	6.67	46.69	9.7×10^{-19}
Theory questions (n=8) - Post-test	34.40	6.76	13.34	46.69	
Calculation skill questions (n=7) - Pretest	19.51	6.91	5.00	36.12	1.1×10^{-40}
Calculation skill questions (n=7) - Post-test	33.48	6.49	16.11	41.12	

intervention in Steril Dosage Form Technology course

Note: Each score criteria counted for a total 134 students and statistical analysis was subjected to each students' pre and post-test score. *SD: Standard deviation

More details of the numerical data on the pre-test and post-test scores are presented in table 1. Based on the mean data, an increase in the overall score, theoretical ability, and calculation skills was 51.38, 35.23, and 71.62%, respectively. This result is in line with the t-test statistical analysis results, which gave a value of p <0.05, so statistically, there was a significant change in students' theoretical understanding and skills before and after the intervention.
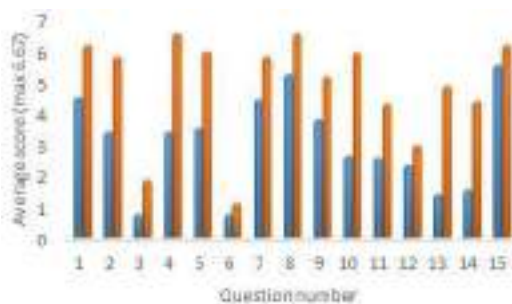

Figure 2. Pre-test (blue) and post-test (orange) score distribution by the question

Based on each item score, all questions show an increase in the average score after the intervention, especially in items number 10-14, which are part of the calculation questions. A noticeable increase occurs in item number 13, which is related to students' ability to determine the reference data that need to be used in tonicity calculations.

4. DISCUSSION

This study showed that online self-learning from videos contains a particular topic significantly improved the assessment score of knowledge and skill. The students were previously learned in a conventional teaching method using a web conference, and most of them scored less than 50 points. The calculation question gave lower scores. This result is in line with the theory that calculation skills might need repetition to understand the step entirely [17,19]. Thus, this intervention facilitated the student to rewatch the steps until they fully understand how to calculate the tonicity. These findings contribute to advancing online learning method in the Faculty of Pharmacy, Universitas Andalas. Additionally, in just less than one-day intervention, this study showed a significant improvement of students` course learning outcomes in Sterile Dosage Form Technology. This is aligned with the implementation of Outcome Based Education (OBE) in Indonesia.

In terms of cognitive engagement, this method provides a good example. The media used, a video, was preferred by the students. Wong et.ar did a research about the media preferred by the students between a voice-over power point and web conference recording, and the former gain most of the votes [19].

Moreover, the students are expected to have a good analysis in formulating an injection in laboratory activity in the next few months. Since they can calculate a formula's tonicity, they would come with a more rational and isotonic formula.

5. CONCLUSION

The score comparison between the pre-test and post-test with video intervention shows positive results regarding student performance in understanding the tonicity module, both theory and calculation skill. This method can be applied to other Undergraduate Pharmacy Study Program classes to fulfil the course learning outcome. This online learning system may be optimally implemented to deliver learning activity in the COVID-19 pandemic.

AUTHORS' CONTRIBUTIONS

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