### LEMBAR HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW* KARYA ILMIAH : PROSIDING INTERNASIONAL

Judul Jurnal Ilmiah (Artikel) Nama/ Jumlah Penulis Status Pengusul Identitas Jurnal Ilmiah	: :	Some Nikkei penuli a. N b. N c. V d. Pe e. D f. A A	Properties of Coideal n Prima Puspita/2 s ke-1 fama Jurnal fomor ISSN fol, No., Bln Thn enerbit OI artikel (jika ada) lamat web jurnal lamat Artikel	ove:	Journal of Physics: Conf. Series ISSN: 1742-6588/ e-ISSN: 1742-6596 Vol, No, 2018 IOP Publishing 10.1088/1742-6596/1097/1/012088 https://iopscience.iop.org/journal/1742-6596 https://iopscience.iop.org/article/10.1088/1742- 6596/1097/1/012088/pdf
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Prosiding Nasional

Hasil Penilaian Peer Review :

		Nilai Re		
	Komponen Yang Dinilai	Reviewer 1	Reviewer 2	Nilai Rata-rata
a.	Kelengkapan unsur isi Prosiding (10%)	3	2,8	2,9
b.	Ruang lingkup dan kedalaman pembahasan (30%)	9	8,9	8,95
c.	Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	8,5	8,5	8,5
d.	Kelengkapan unsur dan kualitas terbitan/ Prosiding (30%)	8	8, 9	8,45
	Total = (100%)	28,5	29,1	28,8
	Nilai Pengusul = 60% x 28,8 = 17,28			

Reviewer 1

Nama : Prof. Dr. Sunarsih, M.Si NIP. : 195809011986032002 Unit Kerja : FSM Undip Bidang Ilmu: Matematika

Semarang, Reviewer 2 Χ

Nama : Bayu Surarso, Ph.D NIP. : 196311051988031001 Unit Kerja : FSM Undip Bidang Ilmu: Matematika

### LEMBAR HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW* KARYA ILMIAH : PROSIDING INTERNASIONAL

Judul Jurnal Ilmiah (Artikel) Some Properties of Coideal over Coalgebras : Nikken Prima Puspita/2 Nama/ Jumlah Penulis : Status Pengusul penulis ke-1 : Identitas Jurnal Ilmiah Nama Jurnal Journal of Physics: Conf. Series : • а b. Nomor ISSN ISSN: 1742-6588/ e-ISSN: 1742-6596 Vol, No., Bln Thn Vol. -, No.-, 2018 c. Penerbit **IOP** Publishing d. DOI artikel (jika ada) 10.1088/1742-6596/1097/1/012088 e. https://iopscience.iop.org/journal/1742-6596 f. Alamat web jurnal Alamat Artikel https://iopscience.iop.org/article/10.1088/1742-6596/1097/1/012088/pdf Prosiding Internasional terindek pada scimagojr dan scopus Kategori Publikasi Prosiding  $\sqrt{}$ (beri ✓ pada kategori yang tepat) Prosiding Internasional terindek scopus, IEEE Eexplore Prosiding Nasional Hasil Penilaian Peer Review : Nilai Maksimal Prosiding Internasiona Internasional scopus IEEE Nilai Akhir terindek Komponen Nasional Yang Scimagojr Yang Dinilai Diperoleh &scopus

	30			
a. Kelengkapan unsur isi Prosiding (10%)	3			3
b. Ruang lingkup dan kedalaman pembahasan (30%)	9			9
<ul> <li>Kecukupan dan kemutahiran data/informasi dan metodologi (30%)</li> </ul>	9			8,5
d. Kelengkapan unsur dan kualitas terbitan/ Prosiding (30%)	9			8
Total = (100%)				28,5
Nilai Pengusul = 60% x 28,5 = 17,1				
Catatan Penilaian artikel oleh Reviewer :				
1. Kesesuaian dan kelengkapan unsur isi	prosiding:			
Kelengkapan unsur isi prosiding dan l	kesesuaian paper	telah ditulis der	ıgan baik mulai	dari abstrak,
pendahuluan, dasar teori, pembahasan hi	ngga kesimpulan d	dan daftar pustak	a lengkap	
2. Ruang lingkup dan kedalaman pemba	hasan:			

Ruang lingkup dan kajian berupa struktur aljabar sebagai dualisasi dari ideal atas ring yang disebut dengan coideal. Artikel ini dilakukan tahun 2018 sebagai hasil diskusi dengan sesama algebraist di UGM, nmun bukan merupkan hasil disertasi. Sifat-sifat dari coideal yang diperlihatkandiangka dari sifat ideal yang ada di teori ring.

3. <u>Kecukupan dan kemutakhiran data/informasi dan metodologi:</u> Kecukupan dan kemutakhiran data berasal dari berbagai sumber dari referensi sebanyak 8 referensi, walaupun terdapat 5 referensi yang out of date < 10 tahun tapi telah disitasi dan diulas dengan baik serta metodologinya juga baik.</p>

 Kelengkapan unsur dan kualitas terbitan: Kelengkapan unsur dan kualitas terbitan adalah baik dengan simililarity artikel sebesar 14%.

> Semarang, 16 Maret 2023 Reviewer 1

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Judul Jurnal Ilmiah (Artikel) Nama/ Jumlah Penulis Status Pengusul	:	Sor Nik pen	ne Properties of Coideal ken Prima Puspita/2 julis ke-1	ove	r Coalgebras	
Identitas Jurnal Ilmiah	:	a.	Nama Jurnal	:	Journal of Physics: Conf	f. Series
		b.	Nomor ISSN	:	ISSN: 1742-6588/ e-ISS	N: 1742-6596
		c.	Vol, No., Bln Thn	:	Vol, No, 2018	
		d.	Penerbit	:	IOP Publishing	
		e.	DOI artikel (jika ada)	:	10.1088/1742-6596/109	7/1/012088
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f.	Ruang lingkup dan kedalaman pembahasan (30%)	9			8,9
g	Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9			8,5
h	Kelengkapan unsur dan kualitas	9			8,9
	Total = (100%)				29,1
	Nilai Pengusul = 60% x 29,1 = 17,46				
С	atatan Penilaian artikel oleh Reviewer :				
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	Artikel membahas materi bidang aljabar.	Kelengkapan artil	kel cukup baik, m	ulai dari abstral	k, pendahuluan,
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8. <u>Kelengkapan unsur dan kualitas terbitan:</u> Artikel diterbitkan pada IOP Publishing dengan simililarity artikel sebesar 14%.

> Semarang, Maret 2023 Reviewer 2

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# **Combination Effect of Temperature and Light Intensity on** Lipid Productivity of Tetradesmus obliquus

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Abstract. Lipid enhancement is important to reduce production cost thus increasing the commercial values of microalgal biofuel production. Physical stress such as temperature and light intensity are known to increase lipid productivity because these factors might affect the phase transition of lipid, macromolecule formation and physiochemical reactions of microalgae. In this study, the effect of light intensity and temperature on lipid productivity of *Tetradesmus obliquus* was studied. T. obliguus UPSI-JRM02 was cultured in BG11 media at different temperature range (25-40°C) and light intensity (4000-30000 lux), respectively, within 14 days of growth period. The highest lipid productivity was obtained at temperature and light intensity of 36°C and 23500 lux. At this condition, 27 mg/L/day of lipid productivity and 23% of total lipid was successfully produced. The result shows the possibility of increasing *T.obliquus* lipid productivity by giving physical stress to the cell.

### 1. Introduction

In the past few years, research on alternative ways to replace the usage of fossil fuel has been conducted following the increasing concern on the decreasing stock of the resource. One of the notable discoveries is the use of microalgae biofuel as an alternative that has shown promising results. The capabilities of microalgae biofuel were attributed to the fact that it requires less area, has higher growth rate, and produces less carbon footprint, whereas biofuel from terrestrial plant is taking too much land area which is important for the food industry. Microalgae biomass is useful as feedstock for the production of bioethanol, biohydrogen, biodiesel, and bio-oil [1]. However, due to low productivity and high operation cost, the production of biofuel from microalgae is considered unaffordable [2]. In fact, the technologies for mass production of microalgae cultivation and for processing and conversion of microalgae biomass are still underdeveloped [3]. A few strategies nevertheless have been taken to increase the productivity of

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# Using bar model to solve word problems on profit, loss and discount

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Abstract. With Brunei's participation in the PISA starting 2018, there is a need to improve students' mathematics competencies, particularly their problem solving skills. The Bar Model is a distinctive problem-solving strategy introduced in Singapore and is one of the key to Singapore's success in PISA 2012 Problem Solving. This action research examined the use of Bar Model to help fifty Year 9 students in one government school in Brunei in solving word problems involving profit, loss and discount. Paired-sample t-test revealed significant difference in the mean score at p < 0.05 between the pre-test (M=4.76) and post-test (M=6.10) after intervention lessons. Despite the mean mark of post-test still lower than the passing mark, there is an overall increase in the number of students who improved in the post-test compared to the pre-test. In item-by-item analysis, improvements were observed in most questions; however questions on percentage calculation of profit, loss and discount still indicated small improvement, with two items decreased in the post-test performance. With more practice and guidance, particularly to overcome similar common errors done by students in the post-test, the Bar Model is a valuable problem-solving strategy in attempting word problem question, and help enhance students' problem-solving competencies.

#### 1. Introduction

Problem-solving is not entirely a new skill, however recently gained significance as a consequence of the rising concern for 21<sup>st</sup> century learning. As modern society is getting more complex, students need to be able to transfer and apply the knowledge and skills they learned in school into real-life situations.

According to the Programme for International Student Assessment (PISA) results from PISA 2012 Problem Solving, Singapore scored the highest in the assessment for problem solving with the highest number of top-performing students in problem solving. The results are due to Singapore's emphasis on problem solving in its mathematics curriculum, and the introduction of Bar Model [1]. As Brunei will officially participate PISA in 2018, there is a need to implement various teaching initiatives and strategies that will further improve students' academic performance, particularly in mathematics [2]. This study aimed to investigate the effectiveness of Singapore's Bar Model as a problem-solving strategy to help enhance Brunei Year 9 students' problem solving skills.

Majority of teachers in Brunei are still practicing the drill-and-practice algorithmic method accompanied with the keyword strategy or rote memorisation, with little understanding, of the solution

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# Keratinase-producing fungi from local environmental samples of Far South Thailand and their efficiency in hydrolyzing keratinous wastes

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Abstract. Samples from around BangoRana, BangoAsae, and Tanod, Narathiwat Province, Thailand were screened for keratinase-producing fungi. By using Horikoshi media and keratin (1%) agar plate, 3 isolates of fungi were shown to produce wider clear zone, and they were Aspergillus sp., Penicillin sp. and Cladosporium sp., and designated as Aspergillus KF1, Penicillin KF2 and *Cladosporium* KF3. Each isolate was growth in Feather Meal Medium with 37°C incubation in shaking condition. Results showed that these fungi had typical growth profile. Extracellular keratinase profile for *Penicillium* KF2, the keratinase release began at the late lag phase (1 U/ml), whereas those of Aspergillus KF1, and Cladosporium KF3 started at the log phase (U/ml: 3.9 and 2.9). Maximal keratinase production was observed in the fungi culture on day 4 and day 5 upon shaking incubation at 37°C. Different activities were observed in U/ml likes 70.7 for Aspergillus KF1; 83.5, Penicillium KF2; and 72.4, Cladosporium KF3. Aspergillus KF1 and Penicillin FK2 reached their maximum on day 4 (CFU/ml: 8.9 x 10<sup>6</sup> and 8.4 x 10<sup>6</sup>) Cladosporium FK3 on day 5 were  $8.95 \times 10^6$  CFU/ml. Keratinases were expected to be of primary metabolites, and hence best harvested at the beginning of stationary phase.

#### 1. Introduction

Feathers constituting 5-7% of the total weight of mature chickens are slow degradable by nature as they are made up primarily of keratin, a fibrous and insoluble structural protein. Being in mechanical stability and resistance to common proteolytic enzyme such as pepsin, trypsin and papain [1], these feathers are often accumulated as an increasingly sizable waste disposal problem. Several different approaches have been used for disposing of feather waste, including land filling, burning, natural gas production and treatment for animal feed. Most feather waste is land filled or burnt which involves expense and can cause contamination of air, soil and water [2]. Still feathers are currently used to manufacture feather meal through thermal processing but with low nutritional value. Feathers hydrolyzed by microbial keratinases have been used as additives for animal feed [3, 4], as well as have potential use as organic fertilizers, production of edible films and rare amino acids [4, 5].

Many microorganisms such as bacteria, Actinomyces and fungi are known produce keratinases [6, 7, 8]. However, their action on keratin is still not clear despite using purified keratinases. These days,

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## Using Video Integrated with Local Potentiality to Improve Students' Concept Mastery in Natural Science Learning

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Abstract. This research is aimed at determining the effectiveness of using video that was integrated with local potentiality to improve students' concept mastery in natural science learning. A quasi-experimental, non-equivalent control group design was used to pursue the purpose of this research. The population was all first-year students of State Junior High School 2 of Jetis that was located in Bantul Regency. Two groups observed and assessed in this research were VII C as the experimental group and VII D as the control group. While the control group students learned natural science concepts through conventional teaching methods, the experimental group through video. The assessment used to measure students' concept mastery was a multiple-choice test related to the concepts of energy in the systems of life. The data related to students' concept mastery were analyzed using the one-way ANOVA and the normalized gain analysis. The findings revealed that the use of video that was integrated with local potentiality was effective to improve students' concept mastery in natural science learning. Furthermore, the significance of this research mainly lies in its findings that can be used as references to review or design natural science learning that is integrated with local potentiality.

#### **1. Introduction**

Natural science is a body of knowledge concerned with natural phenomena that occur in our surroundings [1]. Learning natural science requires a deep understanding of concepts. However, sadly, there are still many cases found where students are only urged to memorize concepts, and only a few attempts are made to encourage them to understand the meanings of those concepts thoroughly [2]. Achieving a good understanding of concepts should be started from meaningful cognitive processes either consciously or unconsciously, where students are allowed to integrate new inputs of knowledge with what they have learned [3]. Cognitive processes related to learning skills include the abilities to remember, understand, apply, analyze, evaluate, and create [4]. Then, it is crucial to encourage and help students develop qualities in those cognitive aspects through practices. They can be encouraged to learn concepts of natural science through the application of those concepts to everyday life; for instance, by exploring the local potentiality of the place they live in. The integration of local potentiality with natural science learning can help students understand concepts more properly and contextually [5]. Therefore, it is hoped that the integration of learning activities with local potentiality can give positive effects on the improvement of natural science learning achievement if compared to conventional models of teaching and learning [6]. The general purpose of this integration is to prepare students effectively to have a deeper and wider understanding of their surroundings as well as proper attitude toward local potentiality. So, they will in turn be ready to preserve and develop a variety of qualities of local potentiality in the area where they live [7].

Indonesia is the largest archipelago country in the world with more than 10.000 islands that include five main islands and thousands of smaller islands [8]. The diversity of geographical locations, socio-