

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

Judul Karya Ilmiah : *Social Cognitive Predictors of Interest in Research Among Life Sciences Academics*

Jumlah Penulis : 3 orang

Status Pengusul : Penulis ke-1

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- c. Thn Terbit, Tempat Pelaks. : 2018, Yogyakarta, Indonesia
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<b>Total = (100%)</b>	<b>30</b>		<b>28</b>
<b>Nilai Pengusul = 60% x 28 = 16,8</b>			

**Catatan Penilaian artikel oleh Reviewer :**

**1. Kesesuaian dan kelengkapan unsur isi prosiding:**

Artikel ini sudah ditulis sesuai unsur-unsur artikel prosiding. Title legolong jelas. Abstract jelas dan padat. Introduction sudah mereview variabel antecedent minat rekabukun riset perh akademisi di bidang life sciences. Method berisi desain penelitian. Discussion menggarisbawahi kebaruan mediaton model yang melibatkan variabel research self-efficacy, research outcome expectations, dan interest in researc. References, sitasi dalam teks, dan tabel tulis secara umum disajikan dengan mengikutr APA Publication 6th Ed.

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Artikel membahas bagaimana research outcome expectations menjadi mediator parsial dalam hubungan antara research self-efficacy dan interest in research pada para akademisi yang mendukuh bidang life sciences. Isi artikel mengat dinamika hubungan antar variabel dari perspektif sosial cognitive career theory kebaruan dari model structural final yang dibahas, lengkap dengan implikan, kelemahan dan saran bagi partisipan dan peneliti selanjutnya.

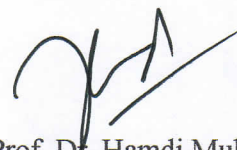
**3. Kecukupan dan kemutakhiran data/informasi dan metodologi:**

Data yang digunakan untuk penilita kuantitatif yang disajikan dalam artikel ini tergolong sangat memadai karena melibatkan 240 akademisi dari berbagai keilmuan. Analisis dengan structural equation modelling. Annot graphic cukup memperjelas model final. orisinalitas artikel baik, dengan mempertimbangkan turnit in similarity indeks = 10% dan 75% referensi digunakan di artikel adalah terbitan 10 tahun terakhir.

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Depok, 3 Februari 2020  
Reviewer



Prof. Dr. Hamdi Muluk, M.Si.  
NIP. 196603311999031001  
Unit kerja : Fakultas Psikologi  
Universitas Indonesia  
Bidang Ilmu: Psikologi

**LEMBAR  
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d. Kelengkapan unsur dan kualitas penerbit (30%)	9		8,5
<b>Total = (100%)</b>	<b>30</b>		<b>28</b>
<b>Nilai Pengusul = 60% x 28 = 16,8</b>			



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Sistematika penulisan artikel ini ditulis dengan mengikuti alur penulisan artikel dalam prosiding meliputi Title, Abstract, Introduction, Method, Results, Discussion, Conclusion, References. Title singkat dan jelas. Abstract yang disajikan termasuk jelas dan sistematis. Dalam bagian Introduction, penulis sudah melakukan review pada tiap variabel. Di bagian Method, penulis memaparkan desain penelitian yang dipilih, termasuk partisipan, instrumen psikologi yang digunakan. Di dalam Results, penulis memaparkan analisis data yang digunakan dan temuan yang dihasilkan. Pada bagian Discussion, penulis memberikan penjelasan mengenai hasil penelitiannya dan menyebutkan kebaruan model yang diajukannya. Penulisan references juga sudah sesuai kaidah penulisan ilmiah.

**2. Ruang lingkup dan kedalaman pembahasan:**

Ruang lingkup artikel ini mengulas tentang dinamika hubungan antar variabel dari perspektif Social Cognitive Career Theory (SCCT) yang dikemukakan oleh Lent, Brown, dan Hackett (1994). Dalam pembahasan, penulis menghighlight novelty dari model structural final. Penulis juga memaparkan implikasi, kelemahan, dan saran bagi partisipan dan peneliti selanjutnya secara komprehensif. Dari berbagai paparan, sudah menjadi bukti kedalaman bahasan artikel.

**3. Kecukupan dan kemitakhiran data/informasi dan metodologi:**

Peneliti melibatkan 240 akademisi yang menekuni life science dari beragam latar belakang keilmuan. Kecukupan partisipan ini menunjukkan data/ informasi yang tepat. Data juga dianalisis secara mutakhir dengan structural equation modeling. Hasil cek plagiasi adalah 10% tergolong rendah dan menandakan orisinalitas artikel, serta kemitakhiran didukung dengan mayoritas referensi yang digunakan merupakan terbitan 10 tahun terakhir.

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Surabaya, 11 Maret 2020  
Reviewer

  
Prof. Dr. Drs. Cholichul Hadi, M.Si., Psikolog  
NIP. 196403231989031002  
Unit kerja: Fakultas Psikologi Universitas Airlangga  
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## Social Cognitive Predictors of Interest in Research among Life Sciences Academics (Conference Paper) [\(Open Access\)](#)

Sawitri, D.R. ✉️, Nurtjahjanti, H., Prasetyo, A.R.

Faculty of Psychology, Diponegoro University, Jalan Prof Sudarto, S.H, Tembalang, Semarang, 50275, Indonesia

### Abstract

↕ View references (15)

Research interest is the degree to which an individual is interested in conducting research-related activities. Nowadays, Indonesian higher education academics are expected to be research productive, especially those in life sciences. However, what predicts interest in research among life sciences academics is rarely known. We surveyed 240 life sciences academics (64.6% female, mean age = 31.91 years) from several higher degree institutions in Indonesia, using interest in research, research self-efficacy, and research outcome expectations questionnaires. We used social cognitive career theory which proposes that individual's interests are the results of the interaction between one's self-efficacy beliefs and outcome expectations overtime. Structural equation modelling demonstrated that research self-efficacy was directly and indirectly associated with interest in research via research outcome expectations. Understanding the social cognitive predictors of interest in research contributes to an understanding of the associations between research self-efficacy, outcome expectations, and interest in research. Recommendations for life sciences academics, faculties, and higher education institutions are discussed. © Published under licence by IOP Publishing Ltd.

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## Abstract

FOREWORD FROM THE CHAIR OF THE 3<sup>RD</sup> ICTCRED 2017

On behalf of the Organizing Committee, I would like to extend our warmest welcome to you at the International Conference on Tropical and Coastal Region Eco Development (ICTCRED) 2017. This annual conference is the third event after the second has been successfully conducted in 2016 at Bali. This conference is organized by Research and Community Services Institute (LPPM), Diponegoro University. The conference aims to provide a forum for researchers, academicians, professionals, and industries to expose and exchange innovative ideas, methods, and experience in the areas related to tropical life sciences and coastal development. This conference also provides forum for researchers and scientists to exchange ideas and their current achievements.

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Universitas Diponegoro – Indonesia

*“Effects of sugar addition on the thermal degradation of phycocyanin from Spirulina sp.”*



**Prof. Gerard Pals**

VU University Medical Center – Netherlands

*“Cancer and the environment”*



**Prof. Junichi Tanaka**

University of the Ryukyus – Japan

*“Exploration of coral reef organisms for bioactive molecules and related issues”*



**Dr. Roel H. Bosma**

Wageningen University & Research – Netherlands

*“Investing in climate change mitigation and adaptation on mangrove and aquaculture doubles benefits.”*



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## Preface

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**Social Cognitive Predictors of Interest in Research Among Life Sciences Academics**

**Dian R. Sawitri, Harlina Nurtjahjanti and Anggun R. Prasetyo**

## Social Cognitive Predictors of Interest in Research Among Life Sciences Academics

**Dian R. Sawitri**<sup>1\*</sup>, Harlina Nurtjahjanti<sup>1</sup>, Anggun R. Prasetyo<sup>1</sup>

<sup>1</sup>*Faculty of Psychology, Diponegoro University, Jalan Prof Sudarto, S.H., Tembalang, Semarang 50275, Indonesia.*

*\*Dian. R. Sawitri, mobile: +628112798878, email: dian.r.sawitri@gmail.com*

**Abstract.** Research interest is the degree to which an individual is interested in conducting research-related activities. Nowadays, Indonesian higher education academics are expected to be research productive, especially those in life sciences. However, what predicts interest in research among life sciences academics is rarely known. We surveyed 240 life sciences academics (64.6% female, mean age = 31.91 years) from several higher degree institutions in Indonesia, using interest in research, research self-efficacy, and research outcome expectations questionnaires. We used social cognitive career theory which proposes that individual's interests are the results of the interaction between one's self-efficacy beliefs and outcome expectations overtime. Structural equation modelling demonstrated that research self-efficacy was directly and indirectly associated with interest in research via research outcome expectations. Understanding the social cognitive predictors of interest in research contributes to an understanding of the associations between research self-efficacy, outcome expectations, and interest in research. Recommendations for life sciences academics, faculties, and higher education institutions are discussed.

### 1. Introduction

Understanding the development of interest in research is an important foundation to building a model to explain research productivity[1]. Previous researcher investigated research motivation in business faculty members[2], other researchers found the relationships between achievement motivation, research environment, and interest [3-4]. More recently, researchers then developed a scale to measure research motivation[5]. In 2012, Deemer, Mahoney, and Ball used it to explain research engagement in academics. However, the participants were limited in science, technology, engineering, and mathematic (STEM) areas[6].

Social cognitive career theory explains the developmental processes of interests, choice, and performance outcomes in the career and education domains. From this theoretical perspective, interests are reflective of the interaction between individual's efficacy beliefs and outcome expectations over time[7]. Research self-efficacy is an estimation of individuals ability to successfully carry on research-related tasks, for example collecting data, analysing data. This belief is expected to affect the initiation and persistence of those research-related tasks[8]. Research outcome expectations are beliefs about the outcomes of a course of research-related action[9]. Individuals act on the basis of their judgment about what they are able to do (i.e., self-efficacy), as well as on the beliefs about the expected consequences of their actions. Having high outcome expectations (i.e., a sense that



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## Effect of Melanin Free Ink Extracted From Squid (*Loligo* sp.) on Proximate and Sensory Characteristics of Soft-Bone Milkfish (*Chanos chanos*) During Storage

Tri Winarni Agustini, Hadiyanto, Ima Wijayanti, Ulfah Amalia and Soottawat Benjakul

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## Preliminary Study On Gonad Maturity Stages of the Sea Cucumber *Paracaudina australis* from Kenjeran Water, Surabaya, Indonesia

Widianingsih Widianingsih, Muhammad Zaenuri, Sutrisno Anggoro, Hermin Pancasakti Kusumaningrum and Retno Hartati

# Effect of Melanin Free Ink Extracted From Squid (*Loligo* sp.) on Proximate and Sensory Characteristics of Soft-Bone Milkfish (*Chanos chanos*) During Storage

Tri Winarni Agustini<sup>1\*</sup>, Hadiyanto<sup>2</sup>, Ima Wijayanti<sup>1</sup>, Ulfah Amalia<sup>1</sup>,  
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**Abstract.** Antioxidant could be extracted and isolated from squid inks. Squid ink in the form of melanin free ink (MFI) could be act as an electron donor which can stabilize free radicals in lipid oxidation. This study was carried out to assess the antioxidant activity of squid inks converted into MFI in different dilution and to optimize the extraction conditions for the application of MFI as an antioxidative agent on fish product. Three different types of MFI extracts i.e : pure squid ink, squid ink with 5 times dilution and squid ink with 10 times dilutions by using cooled ionized water (4°C). The ink was then centrifuged at 18.000 x g for 30 minutes at cooled centrifuge (4°C) followed by DPPH analysis. The results showed that the IC50 of MFI extracts were 2.84 ppm; 1.11 ppm and 0.34 ppm, respectively ( $p < 0.05$ ). The results indicated that squid ink with 10 times dilution in extraction of MFI had the highest value in free radical inhibitory. Although the IC50 of three different dilutions are equally low, and are considered as very strong antioxidative agent, however, it showed that the MFI extracted from squid ink had the ability to prevent free radical

Keywords : *antioxidant, squid ink, melanin free ink, extract, lipid oxidation*

## 1. Introduction

Squid (*Loligo* sp.) production in Indonesia increase 30.40% starting from 2000-2010, within year 2009-2010 significant increase of 80.8% was occurred. Squid production in 2010 reached 10,860 tons [1]. Processing of squid has results in some wastes including viscera and ink which is potential as raw material for bioactive compound resources which can be utilized as antioxidant, antibacterial and so on. Squid ink can be used as antioxidant in the form of squid ink polysaccharides [2] and melanin free ink [3]. Application of squid ink on some fisheries products in Indonesia as preserving agent is still



**Conditions of Decapods Infraorders in Dead Coral *Pocillopora* sp. at Pemuteran, Bali: Study Case 2011 and 2016**

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**The Effect of Different Feed and Stocking Densities on Growth And Survival Rate Of Blue Swimming Crablets (*Portunus pelagicus*)**

R W Ariyati, S Rejeki and **R H Bosma**

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**Phycocyanin stability in microcapsules processed by spray drying method using different inlet temperature**

L Purnamayati, EN Dewi and R A Kurniasih

# Conditions of Decapods Infraorders in Dead Coral *Pocillopora* sp. at Pemuteran, Bali: Study Case 2011 and 2016

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## Abstract

Decapods are marine organism which have burrowing-life characteristic and tend to live in the hard coral, such as *Pocillopora* sp. Pemuteran district is located in West Bali with high marine biodiversity. In 2016 almost all of the coral reefs in this area have bleached. This research investigates the condition of decapods before and after coral bleaching in Pemuteran. Dead corals, *Pocillopora* sp., were taken from 8-12 meters depth in 2016. All organisms within those corals were collected and identified until infraorder and family level. Comparison was done with data collected in 2011. This study found 12 families with a total of 5 infraorder which are equal to the previous data. The number of individual has increased from 88 into 214 individual. The mean presence increased from 6.2875 ind/fam to 15.2875 ind/fam. While the density also increased from 23.68 ind/L to 42.09 ind/L. Uniformity and dominance indices for all infraorder is low. These results show that there is an increase of the density of decapods after coral bleaching event, but the diversity of decapods was slightly changed.

**KEYWORDS:** Decapods, Dead Corals, Bleaching, *Pocillopora* sp., Pemuteran

## 1. Introduction

Indonesia is part of coral triangle and also known as the center of marine biodiversity [1-4]. This area alone represents 76 % of global coral diversity [5] and very diverse fishes [4][6]. Understanding biodiversity of marine organisms is very important for management and conservation practices to avoid declining natural populations and extinction [7-8]. However, corals and fishes represent only a fraction of biodiversity associated with coral reefs. There are many organisms associated with coral reefs and can be used as indicators of biodiversity, especially those which lives in the coral reefs cracks and gaps



# The Effect of Different Feed and Stocking Densities on Growth And Survival Rate Of Blue Swimming Crablets (*Portunus pelagicus*)

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**Abstract.** Blue swimming crab is targeted by commercial fisheries because of the high economic value, good taste, and attractive colors. As a result, the stock is overexploited and fisherman catch market also juveniles. The most sustainable solution would be to stop fishing for commercial trade and to culture this crab from brood to market size. This study aimed to find the best feed and stocking density for the on-growing of crablets. In 20 tanks juvenile crabs with a carapace width  $\pm 1$  cm were stocked in three densities; 40, 60 and 80 crablets /m<sup>2</sup>, and fed ad-libitum twice a day with either trash fish or pellets of shrimp feed, for 8 weeks. The circular ( $\varnothing$  1.6 m x 1 m) tanks with 1 m<sup>3</sup> of water were aerated, and temperature, salinity, dissolved oxygen and pH recorded daily. In the end, growth and survival rates were determined. In general, feeding the crablets at a density of 40 m<sup>2</sup> gave the highest growth. For crablest fed with pellets, the density of 40 m<sup>2</sup> gave significantly better growth than 80 m<sup>2</sup>. The crablets at a density 40 m<sup>2</sup> having a fish diet with the density 40 m<sup>2</sup> grew better than 60 and 80 m<sup>2</sup>. There was no significant difference between feed used among different densities. The lower densities resulted in higher survival, either on crablets fed with pellets or fish. But, crablets fed the fish diet and cultured in the lowest density (40 m<sup>2</sup>) had the highest survival rate.

**Keywords.** Feed, stocking density, blue swimming, crablet

## 1. Introduction

Blue swimming crab (*Portunus pelagicus*) is one of the fishery commodities exported mainly to the United States of America, which reaches 60% of the total catch of crabs. Landings of this crab in 2014 reached 212.571 tonnes [1]. Recently, crab commodities are ranked third or fourth of the total export value of Indonesian fishery products after shrimp, tuna, and seaweed. However, the number of blue swimming crab catch from the wild is declining now and the cultivation of this species is an alternative to be developed.

In term of developing culturing blue swimming crab, several studies have been conducted to develop of the crab aquaculture system, e.g, cannibalism [2], water quality requirement for BSC culture [3-5], diet and feeding behaviour [6-7]. Moreover, the introduction of the artificial hatchery and nursery *P. pelagicus* in Thailand [8] and Indonesia [9] is developing. For instance, the hatchery that developed





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