

## Quantum Physics and its Relation to the Nervous System

A  
n  
K  
a  
  
P  
u  
b  
l  
i  
s  
h  
e  
r

Sultan Tarlacı

# NeuroQuantology

An Interdisciplinary Journal of Neuroscience and Quantum Physics

[Home](#) [About](#) [Login](#) [Current](#) [Archives](#) [Announcements](#) [Editorial Board](#)  
[Submit Now](#) [For Authors](#) [Call for Submissions](#) [Statistics](#) [Contact](#)

[Home](#) > [Editorial Board](#)

## Editorial Board

### Editor-In-Chief, Founder

[Prof.Dr.Riyaz Ahmed Abdul Khan](#), Editor in Chief ( Neuroquantology)

### Advisory and Editorial Board

[Mohammadreza Khoshbin-e-Khoshnazar](#), Physics Department, Curriculum Development Center Organization & Educational Planning

[Dr. Mansi Babbar](#), Postdoctoral Research Fellow, Laboratory of Molecular Gerontology, National Institute on Aging/National Institute of Health, 251 Bayview Blvd, Baltimore, MD 21224., United States

[Dirk K.F. Meijer](#), University of Groningen, Netherlands

[Attila Grandpierre](#), Konkoly Observatory, Budapest, Hungary; Chapman University, Orange, California, United States

[Alfredo Pereira](#), Institute of Biosciences UNESP - Botucatu, Brazil

[Daegene Song](#), Chungbuk National University, Korea, Republic of

[Donald Mender](#), Lecturer in Psychiatry, Yale University, New Haven CT USA, United States

[Diana Gasparyan](#), National Research University - Higher School of Economics (NRU-HSE), Associate Professor, Russian Federation

[Gelengul Kocaslán](#), Department of Economics, Faculty of Economics, Istanbul University, Turkey

[Greg P. Hodes](#), PhD, University of Kansas, United States

[Gustav Bernroider](#), Univ. Prof. University of Salzburg, Dept. of Ecology & Evolution, Austria

[Kemal Koç](#), Baskent University, Dept of Physics, Ankara, Turkey

[Michael B. Mensky](#), P. N. Lebedev Physics Institute, Moscow, Russian Federation

[Fred H. Thaheld](#), Independent Researcher, Atomic, Molecular and Quantum Physics, United States

[Michel Planat](#), Institut FEMTO-ST, Departement LPMO, 32 Avenue de l'observatoire, Cedex, France

[Panar](#), Askdar University

[Pierre Uzan](#), Fondation Santa des Etudiants de France, University Paris, France

[Dr Pravin Thomas](#), University Hospitals Birmingham NHS Foundation Trust, United Kingdom

[Sam Anderson](#), Singapore

[Subhash Kak](#), School of Electrical and Computer Engineering, Stillwater, United States

[Sinan Canan](#), Yadaram Beyazat University, Dept of Physiology, Turkey

**Tatyana Petrovna Lifintseva**, Professor of the Department of History of Philosophy Faculty of Philosophy National Research University Higher School of Economics, Russian Federation

**Aner Tan**, Cukurova University, Department of Physiology, Turkey

**Wlodzislaw Duch**, Nicholas Copernicus University, Dept of Physics, Poland

**Dr Jiapei Dai**, Wuhan Institute for Neuroscience and Neuroengineering Director of Chinese Brain Bank Center South-Central University for Nationalities Minzhu Dadao Wuhan, Hubei China, China

**Dr. Richard Allen Sieb**, Independent Researcher Edmonton, Alberta, Canada, Canada

**Dr John Gardiner**, Freelance Scientist, Glebe 2037, Australia, Australia

**Dr Paul Bessler**, Department of French, University of Toronto 50 St. Joseph Street, Toronto, Ontario, Canada, Canada

**Michele Caponigro**, Italy

**Dr. Contzen Pereira**, Independent Researcher, Mumbai, India, India

**Dr Lex Neale**, Integral Research Center, JFK University, CA, United States, United States

**Dr Dorina Lauritano**, Department of Medicine and Surgery., Italy

**Dr Germano Resconi**, Catholic University, Brescia, Italy, Italy

## Quantum Dynamical Psychology

**Mark Germiné**, Psychoscience, Mount Shasta, California, United States

**Mladen Pecujlija**, Serbia

## Quantum Paradigms of Psychopathology

**Mladen Pecujlija**, Serbia

**Prof. Massimo Cocchi**, Professor of Nutrition Biochemistry Department of Veterinary Medical Sciences University of Bologna, Via Tolara di Sopra, Italy

**Mansoor Malik**, Howard University Hospital, Washington, United States

## Altered States of Consciousness

**Dr Raul Valverde**, Concordia University

**Hideyuki Kokubo**, Meiji University, Japan

**Alan S. Haas**, Harvard University Department of Psychology, United States

**Bruce Greyson**, Carlson Prof. of Psychiatry & Neurobehavioral Sciences, Director, Division of Perceptual Studies University of Virginia Health System, United States

**Cheryl Fracasso**, Saybrook University, State of Washington, Department of Social & Health Services, Developmental Disability Administration, United States

**Harris Friedman**, Psychology at the University of Florida, United States

**Stanley Krippner**, Saybrook University, Oakland, CA, USA, United States

**Vernon M Neppe**, Director, Pacific Neuropsychiatric Institute, Professor, Dept Neurology and Psychiatry, United States

## Philosophy of Consciousness and Mind

**Diana Gasparyan**, National Research University - Higher School of Economics (NRU-HSE), Associate Professor, Russian Federation

**Tatyana Petrovna Lifintseva**, Professor of the Department of History of Philosophy Faculty of Philosophy

National Research University Higher School of Economics, Russian Federation

**Dr. Sergey Korotaev**, Geoelectromagnetic Research Centre of Schmidt Institute of Physics of the Earth Russian Academy of Sciences; Physics Department of Bauman Moscow State Technical University Moscow, Russia, Russian Federation

## Social Neuroscience

**Gelengul Kocaslán**, Department of Economics, Faculty of Economics, Istanbul University, Turkey

**Stephanie Cacioppo**, University of Geneva and Syracuse University, United States

## Basics of Quantum Physics

**L.A. Glinka**, Poland

**Paolo Di Sia**, University of Padova, Italy

**Nagadi Tidjani**, Department de physique, Faculty des Sciences Exactes et Appliquées, University d'Oran1, Algeria

**Antonio Manzalini**, Telecom Italia, Italy

**Prof. Carlos Eduardo Maldonado**, Universidad del Rosario, Colombia

**Teruaki Nakagomi**, Professor Emeritus, Kochi University, Department of Information Science, Japan

**Michael B. Mensky**, P. N. Lebedev Physics Institute, Moscow, Russian Federation

## Basics of Neuroscience

**Burak Yulug**, Dept of Neurology, Assoc. Prof. Private Hospital, Swaziland

**James Giordano**, Professor, Integrative Physiology and Interdisciplinary Neurosciences, United States

**Aner Tan**, Cukurova University, Department of Physiology, Turkey

## Behavioral Neuroscience

**Associate Professor Dr Mohd Normani Zakaria**, Universiti Sains Malaysia, Malaysia

**Mohammad Hossien Delshad**, PhD of Health Education and Health Promotion Department, Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Iran, Islamic Republic of

## Dimensional Biopsychophysics

**Vernon M Neppe**, Director, Pacific Neuropsychiatric Institute, Professor, Dept Neurology and Psychiatry, United States

**Dr. Anabela Cardoso**, Licentiate in Germanic Philology, Faculty of Letters, Classical University of Lisbon  
Doctor of Public Service (Honoris Causa), Roger Williams University, Bristol, R. I., USA., United States

## Neuropsychology and Mental Health

**Fernando Fajardo**, Department of Psychology, University of Extremadura, Spain

## Child and Adolescent Psychiatry

**Dr. Katayoon Razjouyan**, Associate Professor of Child and Adolescent Psychiatry, Shahid Beheshti University of Medical Sciences, Tehran, Iran

## Neurology Disorders

Angelo Lavano, University Magna Graecia Catanzaro, Department of Neurosurgery, Italy

## Honorary Retired Members

Michael Persinger, Died August 14, 2018. Laurentian University, Canada

Ivan Godfroid, Belgium

Dr. Florin Gaiseanu, Independent Senior Researcher 1-st Degree (Professor), Ph. D. (Physics), Information Science and Technology., Romania

Alex Kaivarainen, Finland

Brian Josephson, United Kingdom

Danko D. Georgiev, Bulgaria

Stuart Hameroff, United States

## English Editors

Alec Rylands, Turkey

Dr. Stanley Grant, University of Melbourne, Australia

Dr. Andrew Gavin, Universität München, Germany

Joseph Charlie, Universiteit Utrecht, Netherlands

Dr. Lucas Jacob, Monash University, Australia

Aiden Jackson, Massachusetts Institute of Technology, United States

Derya Turan, Turkey

Yeliz Turan, Turkey



# NeuroQuantology

An Interdisciplinary Journal of Neuroscience and Quantum Physics

[Home](#) [About](#) [Login](#) [Current](#) [Archives](#) [Announcements](#) [Editorial Board](#)  
[Submit Now](#) [For Authors](#) [Call for Submissions](#) [Statistics](#) [Contact](#)

[Home](#) > [Archives](#) > [Volume 20, No 5 \(2022\)](#)

Volume 20, No 5 (2022)

## Table of Contents

[Novel Zinc Oxide Nanostructures Produce by Hydrothermal Method Using different Reactors](#)

[PDF](#)

*Mohanad Q. Fahem and Thamir A.A. Hassan*

[Effects of Service Quality and Patient Satisfaction on Patient Adherence at the Outpatient Rehabilitation Department of Fatmawati National Hospital in Jakarta](#)

[PDF](#)

*Ester Syeftty Pasaribu, Indar , Alimin Maidin , Darmawansyah , Ridwan Mochtar Thaha , Sukri*

[An Automated System for the Classification of COVID-19, Suspected COVID-19 and Healthy Lung CT Images based on Local Binary Pattern and Deep Learning Features](#)

[PDF](#)

*Luma J. Satoory, Hussain S. Hasan and Ali M. Hasan*

[Effectiveness of Mental Health through Audiovisual Media on Schizophrenia Caregiver: A Systematic Review](#)

[PDF](#)

*P. Samsul Arif and Shanti Wardaningsih*

[Augmented Reality based on Android for the Promotion of Furniture Products with Geometry Translation](#)

[PDF](#)

*Dedi, M. Ramaddan Julianti, Jarudin, Syaipul Ramdhan AND M. Fitriansyah AK*

Achievement of Learning Outcome in Off-Campus Learning Programs for Students of the Health Sciences Faculty, Universitas Muhammadiyah Lamongan, Indonesia

PDF

*Virgianti Nur Faridah, Arifal Aris, Siti Sholikhah and Dian Nurafifah*

Review of Humour Interventions to Reduce Stress, Anxiety, and Depression in Adults

PDF

*Inta Susanti, Sylvi Harmiardillah, Virgianti Nur Faridah, Rizky Asta Pramestirini and Isni Lailatul Magfiroh*

Machine Learning Techniques Applied for Exploring Heart Disease and Classifying Stages through ECG Signal

PDF

*K. Babu and Dr.P. Marikkannu*

Comparative Study of Oral Soft Tissue Operations Using a Laser vs. a Scalpel

PDF

*Maha Waleed Alghazali, Rasha Abduljaleel Althabit, Abdulkareem Hussain Alwan, Madiha Fouad Jameel, Afnan Abdulkareem Hussain*

Antioxidant Impact of Green Synthetized Magnetic Nanoparticle of Nigella Sativa Seed Alcoholic Extract in Male Rats

PDF

*Zahraa Mohammed Habeeb, Salim Hussein Jari*



# Achievement of Learning Outcome in Off-Campus Learning Programs for Students of the Health Sciences Faculty, Universitas Muhammadiyah Lamongan, Indonesia

Virgianti Nur Faridah<sup>1\*</sup>, Arifal Aris<sup>2</sup>, Siti Sholikhah<sup>3</sup>, Dian Nurafifah<sup>4</sup>

## Abstract

Independent Campus Policy launched by the Indonesian Minister of Education was a framework to prepare students to become graduates who are tough, and ready to be a leader. Universities with health faculties have implemented independent learning long before this policy was launched, but it is still limited to one activity program, namely internships/work practices. This is a challenge for the health study program to be able to design and implement an innovative off-campus learning process while still paying attention to learning outcomes. This study aims to see the achievement of learning outcomes which include the cognitive, affective, and psychomotor domains during off-campus learning activities at the Faculty of Health Sciences, Universitas Muhammadiyah Lamongan. This study uses a survey method by distributing questionnaires to all Faculty of Health Sciences students as many as 960 students (total sampling) consisting of 683 undergraduate students in Nursing, 95 undergraduate students in Hospital Administration, and 182 undergraduate students in Pharmacy. This survey research uses quantitative data analysis techniques with a descriptive approach. The results obtained are the achievement of the cognitive domain by 96.15%, the affective domain by 96.15%, and the psychomotor domain by 95.83%. Cognitive domains were found to be 50.10% at the C3 level, which can solve problems and exercises. The affective domain is found to be 58.85% at the A3 level, which can appreciate the role of the profession and is motivated to behave according to the role. The psychomotor domain was found to be 32.08% at the P4 level, which is being able to perform a skill/action properly and appropriately. The conclusion of the research is Off-campus learning programs can improve learning outcomes covering cognitive, affective, and psychomotor domains.

458

**Key Words:** Off-Campus Learning, Cognitive, Affective, Psychomotor.

**DOI Number:** 10.14704/nq.2022.20.5.NQ22195

**NeuroQuantology 2022; 20(5):458-463**

## Introduction

To prepare students to face changes in the social, and cultural, the world of work and rapid technological advances, student competencies must be prepared to be more responsive to the needs of the times. Universities are required to be able to design and implement innovative learning processes so that students can achieve learning

outcomes covering aspects of attitudes, knowledge, and skills optimally and always relevant. The Independent Learning Policy - Merdeka Campus is expected to be the answer to these demands. Merdeka Campus is a form of learning in higher education that is autonomous and flexible to create a learning culture that is innovative, unfettered, and to student needs (Kemendikbud, 2020).

**Corresponding author:** Virgianti Nur Faridah

**Address:** <sup>1,2,3</sup>Bachelor Nursing Program, Faculty of Health Science, Universitas Muhammadiyah Lamongan, Indonesia;

<sup>4</sup>Midwifery Diploma Program, Faculty of Health Science, Universitas Muhammadiyah Lamongan, Indonesia.

<sup>1\*</sup>E-mail: virgianti\_nf@yahoo.com

**Relevant conflicts of interest/financial disclosures:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

**Received:** 19 March 2022 **Accepted:** 24 April 2022





The Independent Learning - Merdeka Campus is a new policy program of the Ministry of Education and Culture of the Republic of Indonesia and was inaugurated by the Minister of Education and Culture, Nadiem Anwar Makarim. Merdeka Campus has recently become the center of attention among education circles in Indonesia. Since its launch, it has been able to hypnotize the entire education community in Indonesia. Merdeka Campus is believed to be an effort to free the education system that is more supportive of students and lecturers, in realizing meaningful learning quality to face the disruption of the current era (Prahani et al., 2020). The Independent Learning Policy - Merdeka Campus is often used to health-related universities. Long before the Merdeka Campus policy was introduced, the health study program had adopted autonomous studying, particularly learning off campus. However, it is still restricted to a single program of off-campus activities, mainly hospital internships and practicums. It is a challenge for the health study program to create and implement an innovative off-campus learning process consisting of eight activities while maximizing learning results in the areas of attitudes, knowledge, and skills. Various pros and cons colored the launch of this policy which eventually became a consideration for universities (Kemendikbud, 2020). On the one hand, it is seen that the relevance of the learning materials that have been studied by students in the class to the needs of the industrial world and the field is still relatively low. This program is also considered capable of equipping students with new experiences and opening up wider horizons of knowledge and student experience. As for the other party, they think that this policy will have an impact; (1) the campus will become land for capitalization and commercialization, (2) opening a company to hire workers with low wages through the use of student internships, and (3) difficulties in administration, (4) scientific specifications become invisible, and (5) students cannot be free to choose courses because they have to understand the introduction to the courses taken (Muslim, 2020; Priatmoko & Dzakiyyah, 2020).

The learning process at the Merdeka Campus is one of the very essential manifestations of student-centered learning (Kemendikbud, 2020). MBKM aims to improve the competence of graduates, both soft skills and hard skills to be more prepared and relevant to the needs of the times and prepare graduates as future leaders of the nation with an excellent personalities. The form of learning

activities refers to Permendikbud No. 3 of 2020 Article 15 Paragraph 1 states that it can be carried out in eight forms of programs which include: (1) student exchanges, (2) internships/work practices, (3) teaching in educational institutions, (4) projects in villages, (5) research/research, (6) entrepreneurial activities, (7) independent studies/projects and (8) humanitarian projects (Fuadi & Aswita, 2021). The various forms of independent learning activities will still be assessed for student learning achievements which are marked by changes in overall behavior which include cognitive, affective, and psychomotor aspects (Nurtanto & Sofyan, 2015). The role of cognitive, affective, and psychomotor in the old learning method, measuring the achievement of teaching materials is only emphasized on results, and only on cognitive aspects often neglecting other aspects. So often the results are not effective, because what is needed is a process that takes into account the affective and psychomotor aspects. Before arriving at the psychomotor aspect, it will first experience the cognitive and affective stages. This study intends to examine the cognitive, emotional, and psychomotor consequences of off-campus learning activities conducted by the study program at the University of Muhammadiyah Lamongan's Faculty of Health Sciences. Independent campuses are meant to give field contextual experiences that enhance students' overall skills, prepare them for the workforce, and present chances and challenges for the development of innovation, creativity, capacity, personality, independence, and self-management. Strong hard and soft skills will be developed in pupils by means of a well-designed and -executed autonomous learning program.

### Methods

This study was conducted using the survey method by distributing questionnaires to all undergraduate students in the S1 Nursing, S1 Pharmacy, and S1 Hospital Administration study programs at the Faculty of Health Sciences, University of Muhammadiyah Lamongan regarding learning outcomes in cognitive, affective, and psychomotor domains. off-campus learning activities. The sampling method used is a total sampling of 960 students of the Faculty of Health Sciences, the University of Muhammadiyah Lamongan with details of 683 undergraduate nursing students, 95 undergraduate hospital administration students,



and 182 undergraduate pharmacy students. Data were also obtained from interviews with informants and partners in off-campus learning places consisting of 10 partners in Lamongan city, namely hospitals, villages/communities, and pharmacies; and 5 partners outside the city of Lamongan such as partner hospitals and universities. Interviews were conducted with supervisors of partners who study outside campus related to the results of observations of cognitive, affective, and psychomotor domain achievements. The data was then analyzed to obtain the effect of off-campus learning programs on the cognitive, affective, and psychomotor domains of the students of the Faculty of Health, University of Muhammadiyah Lamongan. This survey research uses quantitative data analysis techniques with a descriptive approach.

## Results and Discussion

### Results

Based on the results of research that has been In a survey of 960 students from the Faculty of Health Sciences at Muhammadiyah Lamongan University, 683 undergraduate nursing students, 95 undergraduate hospital administration students, and 182 undergraduate pharmacy students reported that off-campus learning improves students' cognitive, affective, and psychomotor domains. Fieldwork practices or internships in hospitals, village/community initiatives, student exchanges, and online courses are examples of intentional off-campus learning opportunities. The results can be seen in Tables 1-3.

**Table 1.** Cognitive, Affective and Psychomotor Changes

Changes	Cognitive		Affective		Psychomotor	
	F	%	F	%	F	%
Same	37	3.85	37	3.85	40	4.17
Increase	923	96.15	923	96.15	920	95.83
Total	960	100	960	100	960	100

**Table 2.** The Benefits of Merdeka Campus on Cognitive, Affective and Psychomotor Domains

Usefulness	Cognitive		Affective		Psychomotor	
	F	%	F	%	F	%
Quite useful	49	51.6	49	51.6	166	17.29
Very useful	6	7	6	7		
	46	48.3	46	48.3	794	82.71
	4	3	4	3		
Total	96	100	96	100	960	100
	0		0			

**Table 3.** Achievement of Learning Outcomes

Indicators Domain	F	%
<b>Cognitif (C)</b>		
Able to describe concepts/theories (C1)	251	26,15
Able to interpret data, express ideas (C2)	67	6,98
Able to solve problems, do practice (C3)	481	50,10
Able to formulate problems/creating factors (C4)	76	7,92
Able to find conclusions and problem solutions (C5)	41	4,27
Able to discuss a case, write a report (C6)	44	4,58
<b>Affective (A)</b>		
Able to receive/pay attention to a phenomenon (A1)	173	18,02
Able to obey the rules, do the task (A2)	171	17,81
Able to appreciate the role of the profession, motivated to behave according to the role (A3)	565	58,85
Able to be more diligent, punctual, self-disciplined, objective (A4)	46	4,79
Able to change behavior into character (A5)	5	0,52
<b>Psychomotor (P)</b>		
Able to imitate a skill/action (P1)	243	25,31
Able to arrange a sequence of skills/actions (P2)	122	12,71
Able to demonstrate a skill / action according to the procedure (P3)	219	22,81
Able to perform a skill / action properly and appropriately (P4)	308	32,08
Able to perform a skill/action naturally (P5)	68	7,08
Total	960	100

96.15 percent of the data from the cognitive domain, 96.15 percent from the emotional domain, and 95.83 percent from the psychomotor domain indicated that there was an increase when learning occurred off-campus. Cognitive domain found as much as 50.10 % are at level C3, which can solve problems and practice. The affective domain was found to be 58.85% at the A3 level, which can appreciate the role of the profession and be motivated to behave according to the role. The psychomotor domain was found to be 32.08% at the P4 level, which is being able to perform a skill/action well and appropriately. Researchers also conducted interviews with supervisors from 15 partners in off-campus learning places. Based on the results of interviews,



it was found that 90% of partners expressed satisfaction with students' cognitive abilities when responding. The partner supervisor stated that students were able to describe theories, conclude, discuss and solve cases and make reports in Student Oral Case Analysis (SOCA) activities. In the affective/attitude domain, it was found that 80% of partner supervisors stated that they were quite satisfied with the affective abilities of students during off-campus learning. The partner supervisor stated that most students were able to show attention or appreciation for others, obey rules, and be disciplined. While in the psychomotor domain, it was found that 95% of partner supervisors stated that they were satisfied with the psychomotor abilities of students when the Direct Observation of Procedural Skill (DOPS) activities was carried out. The partner supervisor stated that most of the students were able to perform a skill/action well even though they were still under the supervision of the partner supervisor.

The results of this study indicate that off-campus learning activities are very beneficial for students because that way, students will more easily understand the materials that have been delivered during on-campus learning, both academic and non-academic materials, and gain new experiences related to appropriate off-campus activities. with student passion and honing student soft skills while in the field as a provision to work after graduation later as well as honing students' critical thinking skills to solve problems in the field or the community.

## Discussion

### *Off-Campus Learning Activities*

Both "Merdeka Belajar" and "Kampus Merdeka" include two key themes. Initially, the notion of autonomous learning assumes the existence of mental liberty. According to Nadiem Makarim, educators must instill the notion of intellectual liberty. This perspective should be viewed as an endeavor to acknowledge changes in learning in educational institutions, including elementary, secondary, and postsecondary schools. Second, the autonomous campus continues the notion of independent education. An autonomous campus is an endeavour to shed restraints in order to move more freely (Nora Susilawati, 2021). Activities outside of tertiary institutions may include internships or practicums, implementing community service projects in villages, teaching in

educational units, participating in student exchanges, conducting research, engaging in entrepreneurial activities, completing independent studies or projects, and taking part in humanitarian programs (Prahani et al., 2020). All of these activities can be used to the health study program, however only internships or work practices, community service projects in villages, and student exchanges have been implemented in this study. (a) Internship/work practice, health students can take part in internships in hospitals, both government and private. During the internship, students must be supervised by lecturers or supervisors. The goal is that the theory on campus can be applied during an internship. (b) Projects in the village, similar to the Community Service Program. In this case, health students will be involved in practical activities in the community/village. This social project is to help people in rural or remote areas build a people economy, empower communities to find and solve their public health problems, improve community health standards, and so on. This activity can be carried out in collaboration with village officials (village heads), village midwives, and nurses. (c) Student exchange, is one of the off-campus activities that are in great demand by students. In this case, health students can take classes or courses at foreign or domestic universities. The implementation can be in the form of online courses and hybrid learning. Thus, students can gain additional knowledge and a new atmosphere on other campuses. Grades and credits taken at outside colleges will be synchronized by each college.

### *Achievement of Cognitive, Affective, and Psychomotor Domains*

96.15 percent of the data from the cognitive domain, 96.15 percent from the emotional domain, and 95.83 percent from the psychomotor domain indicated that there was an increase when learning occurred off-campus. The usefulness of MBKM in the cognitive domain was found to be quite useful at 51.67%, the affective domain was also found to be quite useful at 51.67% and the psychomotor domain was found to be very useful at 82.71%. Cognitive domain found as much as 50.10 % are at level C3, which can solve problems and practice. The affective domain was found to be 58.85% at the A3 level, which can appreciate the role of the profession and be motivated to behave according to the role. The psychomotor domain was found to be 32.08% at the P4 level, which is being able to



perform a skill/action well and appropriately.

The findings of this study are consistent with research conducted at the State Christian Institute of Religion Kupang, indicating that its application can effectively enhance students' cognitive abilities and foster innovation through the use of various techniques, such as the discovery of new ideas during the learning process (Lao & Hendrik, 2020). Various types of autonomous learning activities will continue to be evaluated for their contribution to the accomplishment of student learning outcomes. Learning outcomes are the skills acquired by pupils as a result of learning. According to UNESCO, the desired learning outcomes consist of four pillars: (1) learning to know (learning to know); (2) learning to do (learning to do something); (3) learning to be (learning to be something); and (4) learning to live together. Changes in general behavior, including cognitive, emotional, and psychomotor elements, define learning outcomes. The process of transformation might range from basic to sophisticated. Bloom divides the "learning domain" into three divisions or aspects: cognitive, emotional, and psychomotor. The six stages of Bloom's cognitive domain are knowledge, comprehension, application, analysis, synthesis, and assessment. The emotive domain consists of receiving (receiving), reacting (responding), valuing (valuing), arranging (organizing), and describing (characterization). Psychomotor abilities include imitation, manipulation, accuracy, articulation, and naturalness (Nurtanto & Sofyan, 2015).

The independent campus is an extension of the independent learning program that allows students to pursue off-campus study opportunities for three semesters (Kemendikbud, 2020). Universities are required to implement innovations in each of their learning processes, namely student-centered learning, in order to produce graduates who are prepared to adapt to a changing world. Students are not only the top graduates who are proficient in theory, but they can also put theory into practice. Enter the sector armed with in-depth information for significant advances in education's never-ending growth (Siregar, Sahirah, & Harahap, 2020). Universities must take measures to adapt to the implementation of the tri dharma of higher education, both in terms of academic and non-academic activities, including changing the education budget for each academic year (Muslikh, 2020). In addition, this approach has a number of possible flaws, including the fact that a large

number of studies may disrupt the study's intended direction and policy changes by each minister pay less attention to sustainability factors (Lhutfi & Mardiani, 2020).

The increase in cognitive, affective, and psychomotor domains is because it is easier for students to understand the material that has been delivered during on-campus learning, both academic and non-academic materials, and gain new experiences related to off-campus activities that are in line with student passions and hone students' soft skills while at school. in the field as a provision to work after graduation and to hone students' critical thinking skills to solve problems in the field or the community. This complements the learning process on campus, where the measurement of achievement of teaching materials is only emphasized on results, not processes, and more on cognitive aspects often neglecting other aspects.

## Conclusion

Off-campus learning programs can improve learning outcomes covering cognitive, affective, and psychomotor domains in health students. Further research is expected to be more detailed in analyzing the increase in cognitive, affective, and psychomotor domains and can explain the obstacles experienced by health colleges. The limitation of this research is that it does not include cognitive, affective, and psychomotor assessments from the lecturers and student learning outcomes.

## Acknowledgments

For this publication, the authors would like to thank the Directorate General of Research, Technology and Higher Education for funding the research program of the Independent Learning Policy for the Independent Campus and Community Service Based on Research Results and PTS Prototypes for the 2021 Fiscal Year.

## References

- Fuadi, T.M., & Aswita, D. (2021). Merdeka Learn Campus Merdeka (Mbkm): How to apply and the obstacles faced by private universities in Aceh. *Jurnal Dedikasi Pendidikan*, 5(2), 603-614.  
<http://jurnal.abulyatama.ac.id/index.php/dedikasi>
- Kemendikbud, R.D.J.P.T. (2020). *Merdeka Learning Guidebook - Merdeka Campus*.  
<https://doi.org/10.31219/osf.io/ujmte>
- Lao, H.A., & Hendrik, Y.Y. (2020). Implementation of the independence of learning policy in the learning process at





- the IAKN Kupang-NTT Campus. *Dedikasi Pendidikan*, 4(2), 201–210.  
<http://jurnal.abulyatama.ac.id/index.php/dedikasi>
- Lhutfi, I., & Mardiani, R. (2020). Merdeka Learning - Merdeka Campus Policy: How Does It Affect the Sustainability on Accounting Education in Indonesia? *Dinamika Pendidikan*, 15(2), 243–253.  
<https://doi.org/10.15294/dp.v15i2.26071>
- Musliikh. (2020). Philosophical Basis and Analysis of the Independent Learning Policy and an Independent Campus. *Jurnal Syntax Transformation*, 1(3), 40–46.
- Muslim, S.A.M. (2020). *The Challenge of Implementing the "Free Learning, Independent Campus" Policy at Private Islamic Universities in Indonesia*, 1–11.
- Nora Susilawati. (2021). Independent Learning and Independent Campus in View of Humanism Education Philosophy Nora Susilawati Padang State University. *Jurnal Sikola: Jurnal Kaajian Pendidikan Dan Pembelajaran*, 2(3), 203–219.
- Nurtanto, M., & Sofyan, H. (2015). Implementasi Problem-based Learning Untuk Meningkatkan Hasil Belajar Kognitif, Psikomotor, the Implementation of Problem-based Learning to Improve Learning Outcomes of Cognitive, Psychomotor, and Affective of Students in. *Jurnal Pendidikan Vokasi*, 5(November 2015), 352–364.
- Prahani, B.K., Utama Alan Deta, Mochammad Yasir, Sri Astutik, Paken Pandiangan, Sayidah Mahtari, & Husni Mubarok. (2020). The Concept of "Independence Campus" in Accordance with Freire's Critical Pedagogy. *Studies in Philosophy of Science and Education*, 1(1), 21–37.  
<https://doi.org/10.46627/sipose.v1i1.8>
- Priatmoko, S., & Dzakiyyah, N.I. (2020). The Relevance of the Independent Campus to the Competence of Era 4.0 Teachers in the Perspective of Experiential Learning Theory. *At-Thullab: Jurnal Pendidikan Guru Madrasah Ibtidaiyah*, 4(1), 1. <https://doi.org/10.30736/atl.v4i1.120>
- Siregar, N., Sahirah, R., & Harahap, A.A. (2020). The Independent Campus Concept of Learning in the Era. *Fitrah: Journal of Islamic Education*, 1(1), 141–157.