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Article

Information and Communication Technology Teachers' Competence to Support Learning Activities at Elementary School

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A B S T R A C T

Technological developments in the digital era affect many aspects of life, including education. The use of Information and Communication Technology (ICT) is very important in learning in schools, so teachers' ICT competence needs to be considered. This research aims to understand the ICT competency of teachers in Elementary Schools in Lawe Bulan District, Southeast Aceh Regency, efforts to improve this competency, and the factors that influence teacher ICT capabilities. This research uses qualitative methods with interviews, observation and documentation. The research subjects consisted of 76 teachers, with observations on 6 teachers selected based on certain criteria. The average teacher ICT competency in Elementary Schools in Lawe Bulan District is 61 respondents, and 58 respondents are in the "Enough" category. Teachers' efforts to improve ICT competency showed that 15 respondents had good average results, while 60 people were in the "Very Good" category. These efforts include independent study, joint study, and ICT training. The research results indicate that there is no relationship between teacher ICT competency and education level and length of service. However, there is a relationship between efforts to increase teachers' ICT competence and their competence. The involvement of ICT competence in planning, implementation and evaluation of learning is also evaluated, as well as factors inhibiting increasing teacher competence.

Keywords: *Information and Communication Technology (ICT), Teacher Competence, Education, Digital Era Learning*
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INTRODUCTION

The progress of life today is supported by various inventions of modern tools that make human work easier in the 21st century. One important development is Information and Communication Technology (ICT). Information technology processes and stores data to obtain useful information. that the development of ICT is rapid and important for communication today. ICT makes it easier for people to communicate and access information from around the world. that ICT uses computers and networks to process and disseminate data globally. Today, information technology is not only a complement, but has become a daily necessity, used in the economy, social, and education. technology has an impact on educational progress. The use of ICT in learning supports teachers and students that modern technology makes learning more meaningful and improves the quality of education.

Teachers must be effective in learning, especially online. the need for technology to achieve innovative schools. professionalism of teachers who master ICT. However, there are constraints such as infrastructure and resource readiness. Teachers must continue to improve competence in ICT. ICT in SDN can support children's development. The use of ICT media makes learning more interesting and meaningful. the importance of ICT in improving

learning effectiveness. Teachers must adapt to technological developments to succeed in education.

Teacher Competency

According to Wibowo (2016: 271) Competence is an ability to carry out or perform a job or task based on skills and knowledge and supported by the attitude demanded by the job. Competence is the ability to carry out tasks or jobs based on knowledge, skills, and supported by attitudes that characterize individuals. Competence shows a person's ability or capacity. The three components contained in the formulation of competence are the components of skills, attitudes and knowledge that make a person capable of doing a job or task. Spencer and Spencer (2007: 6) state that competence is the basic foundation of people's characteristics and indicates a way of behaving or thinking, equalizing situations, and supporting for a long period of time.

According to Wibowo (2009: 111), there are five types of competency characteristics. Motive refers to something a person consistently thinks about or desires, which drives, directs, and influences their behavior toward a specific action or goal. Traits include physical characteristics and consistent responses to various situations or information. Self-concept encompasses a person's attitudes, values, and self-image, shaping their perception and interactions. Knowledge represents the information an individual possesses in a specific field, contributing to their expertise. Lastly, skills refer to the ability to perform particular physical or mental tasks, including cognitive skills such as analytical and conceptual thinking. These competency characteristics collectively influence an individual's performance and professional development.

According to Armstrong and Baron (1998: 2008), competence is the behavioral dimension underlying competent performance, often referred to as behavioral competence, as it explains how individuals behave when performing their roles effectively. Behavior, when defined as competence, can be classified into three key aspects. First, understanding what needs to be done, which involves critical reasoning, strategic capabilities, and business knowledge. Second, getting work done, which includes an achievement-driven mindset, a proactive approach, confidence, control, flexibility, concern for effectiveness, persuasion, and influence. Lastly, bringing people along emphasizes motivation, interpersonal skills, concern for results, persuasion, and influence. These behavioral competencies collectively contribute to an individual's effectiveness in their professional roles.

Based on their level, competencies can be categorized into core competencies, managerial competencies, and functional competencies. Core competencies are fundamental abilities that align with an organization's strategy and must be possessed by all employees to ensure overall effectiveness. Managerial competencies reflect the skills and performance required for managerial roles, encompassing leadership, decision-making, and strategic planning. Meanwhile, functional competencies describe the specific capabilities needed for a particular role, often related to professional or technical expertise. These three competency levels work together to enhance individual and organizational performance.Core competencies are an understanding of the company's vision, mission and values.

A core competency is a critical ability linked to an organization's strategy that applies to all employees as a mark of the organization's superior expertise. It serves as an essential prerequisite for performing a job with excellence. Meanwhile, managerial competence refers to the ability to carry out management functions effectively, while functional competence is related to specific professional and technical skills required in a particular role. These competencies collectively ensure that individuals and organizations can perform optimally.

According to Wibowo (2010: 339), several factors influence competence. Beliefs and values shape behavior, as people's perceptions of themselves and others determine how they act. Positive self-belief fosters creativity and innovation, enabling individuals to seek new and better ways of working. Skills are a fundamental component of competence; enhancing skills leads to improved overall competency. Additionally, valuable experience plays a

crucial role in shaping a person's competence, as exposure to different situations refines their abilities and decision-making processes.

Personality characteristics also influence competence, though they are relatively stable over time. While personality can evolve, it affects how individuals develop skills. For example, someone with a quick temper may struggle with conflict resolution compared to a person who manages emotions well. Motivation is another key factor, as it drives individuals to master various competencies and improve performance. Furthermore, emotional issues can act as barriers to competency development, and overcoming them—often with support—is essential for growth. Intellectual ability also plays a role, as cognitive skills such as analytical and conceptual thinking impact an individual's ability to develop competencies.

Organizational culture significantly affects competence in several ways. Recruitment and selection processes determine the quality of talent entering the organization. Reward systems communicate the organization's appreciation of competence, influencing employee motivation. Decision-making practices shape competencies related to empowerment, initiative, and motivation. Additionally, an organization's mission, vision, and values guide employees in aligning their competencies with organizational goals. Established customs, procedures, and a commitment to training further emphasize the importance of continuous competency development, while structured leadership development programs enhance leadership competencies within the organization.

Information Technology

Technology can be defined as tangible and intangible entities created by mental and physical effort to achieve value. In this case, technology refers to the tools and machines used to solve real-world problems. The word "technology" is also used to refer to a collection of techniques. In this context, the current level of humanity's knowledge of how to combine resources to produce desired products, solve problems, meet needs and fulfil desires is determined. It includes technical methods, skills, processes, techniques, tools and raw materials. Technology can also be used to refer to a collection of techniques. This relationship involves human knowledge of how to combine resources to produce a desired product, solve a problem, or fulfil a need. Technology includes technical methods, skills, processes, techniques, tools, and raw materials.

Technique is a method used to perform a specific activity or task, often involving a systematic process to achieve a desired outcome. Technology, on the other hand, refers to the research or collection of techniques, tools, and systems used to enhance human capabilities. It can also be seen as an activity that shapes and influences culture. Capability represents the ability to perform a task effectively, while scientific technology is a structured approach to acquiring scientific knowledge. Additionally, skill refers to an individual's proficiency in executing a task, often developed through practice and experience. Lastly, information is data that has been organized and processed to hold meaning and value for its recipient, making it useful for decision-making and problem-solving.

Communication is the process of exchanging information between individuals through a system of symbols or shared actions. From this perspective, information and communication technology (ICT) can be understood as both tangible and intangible entities created through mental and physical efforts to achieve value. Technology encompasses technical methods, skills, processes, techniques, tools, and raw materials used to facilitate various tasks. It is a collection of research and techniques designed to enhance efficiency and effectiveness. In essence, technology refers to the systematic steps followed to accomplish a task. Information and communication technology specifically applies technology to the processing and transmission of information, enabling seamless communication and data exchange across different platforms.

Technology is knowledge ('know-how') that answers the question of how. The country's Department of Research and Technology has developed a definition of information and communication technology as all technologies related to the capture, collection,

processing, storage, distribution and presentation of information. This definition of information and communication technology includes all hardware, software, content and infrastructure. Information and communication technology competencies can be defined as competencies that include knowledge, skills and attitudes in the field of information and communication technology.

When applied to the learning/teaching environment, ICT includes hardware, software, and content (subject matter) that has functions related to retrieval, collection (capture), processing, storage, distribution, and presentation of information (material and infrastructure); . This definition of ICT means that ICT does not only refer to sophisticated (complex) things such as computers and the internet, but also to printed materials, audio cassettes, overhead transparencies (OHT)/overhead projectors (OHP), and sound images as well as traditional ones such as (Tondias), radio and television.

Learning in Primary School

Understanding Elementary School Learning According to Rusman (2018: 144) Learning is a process of interaction between teachers and students, either directly such as face-to-face or indirectly, for example by using learning media such as zoom applications, google classroom and so on, another opinion Windi Fadiyah et al (2020: 15) suggest learning is the process of interacting students with educators, using learning materials, delivery methods, learning strategies, and learning resources in a learning environment. learning is a combination that is composed of human elements, materials, facilities, equipment and procedures that influence each other to achieve learning goals From this explanation, learning is a process or student learning activities with the delivery of knowledge from educators to achieve, understand or gain new knowledge and not yet owned by the educator. So that elementary school learning is a process or learning activity for elementary school students that is adjusted to the material or abilities possessed by students, this can foster the enthusiasm for learning of elementary school students.

Methodological learning activities tend to be more dominant to students while instructional teaching is carried out by teachers, teachers must have good characteristics in carrying out learning in the classroom, the characteristics of a teacher must be an example for students and students at school because the age of elementary school is at the stage of imitating the surrounding environment and as a process of searching for personality or attitudes and behavior that will be applied to their lives. So that the characteristics or personality of the teacher become a mirror for a student or student as a form of learning. Learning Principles in Elementary School Learning principles can affect classroom conditions when there are teaching and learning activities. For this reason, teachers need to explore what knowledge, skills, and experiences students already have so that teaching and learning activities do not start from a void.

In the teaching and learning process, students should be encouraged to engage in activities that promote "learning by doing." One effective approach is the principle of learning through play, where play creates a joyful and engaging atmosphere, motivating students to actively participate in the learning process. Information and Communication Technology (ICT) serves as a valuable learning medium, particularly in elementary schools, by integrating hardware and software tools to enhance the educational experience. According to Latif et al. (2013: 152), the term media originates from the Latin word medius, meaning intermediary or introducer, highlighting its role in facilitating learning. Various ICT-based learning media, including computers, laptops, smartphones, cameras, and game consoles, provide interactive and engaging learning experiences for young learners.

Palaiologou in Dong (2018:1) explains that ICT tools in primary education encompass a range of electronic and digital devices, from computers and microcontrollers to media players and interactive toys. Children today have access to

diverse technologies such as mobile phones, interactive televisions, DVD players, MP3 players, video cameras, and electronic musical instruments, all of which can support their cognitive and creative development. Additionally, ICT-based learning media, including digital cameras, video cameras, and multimedia applications, offer innovative ways to present information and engage students. Based on these perspectives, this paper aims to discuss the ICT competence of teachers in supporting learning activities at SDN Lawe Bulan in Southeast Aceh District, emphasizing the importance of equipping educators with the necessary technological skills to enhance classroom instruction.

METHOD

This research uses qualitative research which is used to research on natural object conditions, where the researcher is the key instrument. The difference with quantitative research is that this research departs from data, utilizes existing theory as explanatory material and ends with a theory. According to Bungin (2003: 147) an integrative and more conceptual analysis method to find, identify, process, and analyze documents in order to understand their meaning, significance and relevance. According to Lexy J. Moleong (2005: 6), qualitative methods aim to understand the phenomena experienced by research subjects. Including by explaining behavior, perception, motivation, behavior, and others as a whole, in terms of language and in a certain natural context, using various natural methods.

FINDINGS AND DISCUSSION

This discussion integrates research findings by examining key aspects related to teachers' competence in utilizing ICT to support learning activities. It explores teachers' efforts to enhance their ICT skills and the relationships between variables such as educational background, ICT competence in teaching, professional development efforts, and the influence of tenure on these aspects. Additionally, the discussion delves into the different strategies teachers use to improve their ICT proficiency, the support systems available to them, the motivations driving their ICT development, and the challenges they face, particularly in the context of primary schools in Lawe Bulan sub-district, Southeast Aceh district. The study findings reveal that, on average, teachers' ICT competence falls into the "Sufficient" category, as indicated by respondents' answers. These results are further supported by qualitative data, which show that teachers are capable of integrating ICT into all aspects of the learning process, from lesson planning to classroom implementation and evaluation, demonstrating their ability to adapt to technological advancements in education..

In the planning process, teachers make use of ICT to prepare annual programs, semester programs, weekly and daily learning plans, and search for teaching materials in accordance with themes and needs. In the implementation of learning, teachers have demonstrated competence in using ICT to display photos or videos that clarify subject matter, as well as using audio devices to support students' motor activities. Research findings also reveal a variety of teacher skills in using ICT devices and available applications.

Furthermore, the International Society for Technology Education (ISTE) in Wong and Daud (2018: 376) explains six dimensions of teacher competence in the use of ICT, including: 1) technology operations and concepts; 2) planning and designing learning environments and experiences; 3) teaching, learning, and curriculum; 4) assessment and evaluation; 5) productivity and professional practice; and 6) social, ethical, legal, and humanitarian issues. Teachers' competence in utilizing various ICT tools and their applications is inseparable from their efforts to continue learning and improving ICT skills. The results of the qualitative research identified several ways that teachers take to improve ICT competencies, including learning independently through video tutorials on YouTube and guidebooks, discussing with fellow teachers, and attending training related to the use of ICT. This finding is in line with the correlation analysis that indicates a relationship between efforts to improve

teachers' ICT competence and the application of ICT in teaching. Furthermore, in an effort to improve ICT competence for learning activities, teachers receive support from various parties, both from the school environment and outside the school.

Within the school, such support includes ICT facilities that support the learning process, information from the principal about available ICT training, and school policies that require the use of ICT in some learning activities. In addition, moral support from fellow teachers also plays an important role in encouraging them to continue learning about ICT. Meanwhile, support from outside the school came from the Kelurahan, which provided laptop facilities for the school, as well as motivation from the SDN supervisor, who always reminded teachers of the importance of ICT competence in supporting the learning process.

In addition to the various supports teachers receive to improve their Information and Communication Technology (ICT) competencies, there is a strong motivation within them to have better skills in this area and keep up with the times. Teachers feel the various conveniences that ICT offers, both in lesson planning, implementing learning activities, and evaluating learning outcomes. This statement is in line with the research findings of Batubara (2017:58) which states that external factors affect teachers' competence in utilizing ICT, including support from the government and school principals to improve teacher professionalism, the availability of ICT facilities at school, and teacher participation in training on planning and learning strategies involving ICT. Similarly, Mumtaz (2000:319-320) adds that supporting factors include teacher motivation, quality of software and hardware, ease of use of ICT, support from the school environment, national policies, and commitment to creating professional learning.

Teachers' Strategies in Improving Information and Communication Technology (ICT) Competencies to Support the Learning Process

Teachers' competence in using ICT is certainly closely related to their efforts to continue learning about this technology. Many ways are taken by teachers to improve their skills in ICT, as expressed in the following statements: “Learning independently from YouTube, guidebooks, besides asking friends” (01. This admission is in line with DW's statement, who also highlighted the importance of self-learning through tutorials on YouTube and discussing with peers. Meanwhile, DW, DI and HA revealed that in addition to self-study and discussions with fellow teachers, they had also attended training. The following are their statements: “In the past, I have attended ICT training from the sub-district IGSDN, but that was a long time ago. She expressed this as follows: “I learn by myself through tutorials on YouTube. Recently, I often attend virtual training on the use of ICT, including the making of learning videos.

Support for teachers in improving Information and Communication Technology (ICT) competencies to support learning activities in public primary schools (SDN). Support plays a crucial role in improving teachers' competencies in utilizing Information and Communication Technology (ICT) to support the learning process at school. According to IP, schools have a responsibility to provide support through available ICT facilities, which can help the learning process. In his statement, he revealed: “If the school facilitates us with laptops for learning, because as time goes by, the learning methods provided by the education office are also growing. She stated: “Support from the school includes facilities such as laptops, speakers, TVs, DVDs, printers, mobile phones, and projectors.

In addition to the facilities provided by the school, DW also receives support from the principal in the form of policies that encourage the use of ICT in learning activities.ICT is very helpful for teachers in providing examples of activities, especially when they are not ready to develop such examples.In her statement, DW revealed: “Moral support in the use of ICT at school comes from the principal who provides policies so that some learning activities involve ICT. In addition, there is also financial support in the form of providing facilities such as laptops, printers, LCDs, wireless, TVs, and DVDs at school.” (DW, 2012).

The principal has a policy to rent out ICT equipment such as projectors to support learning activities, especially since the school does not yet own a projector. The principal also helps by providing information on ICT training for learning, and the school provides supporting facilities. In addition, support from colleagues also further motivates us to integrate ICT in learning. Meanwhile, SA and DI also gained support from school facilities and a contribution from the village who provided laptops for the school. Their statements illustrate this: "Support from the school includes the provision of facilities such as laptops, printers, TVs and DVDs. The principal also supports registration for trainings that are held and we often discuss with the teachers' organization in the cluster'. All six respondents reported support from the ICT facilities available at the school, as well as assistance from the principal, the kelurahan, and the teachers' organization.

Teacher Motivation in Improving ICT Competence to Support the Learning Process at SDN Se-Kecamatan Lawe Bulan. Without motivation from within teachers and support from the environment, efforts to improve information and communication technology (ICT) skills will not succeed. Internal motivation comes from teachers' personal desire to master ICT competencies, while external influences come from fellow teachers, school demands and current learning needs. An example of motivation can be seen from DIs' statements of wanting to understand and utilize ICT for children's learning. All six respondents explained that their motivation was to keep up with the times. ISR emphasized that technological advances encourage her to learn more, and DW reminded of the need to adjust teachers' competencies with the more creative generation Z. IP and HA stated that the motivation to improve ICT aims to modernize learning in the industrial era 4.0. ICT makes the learning atmosphere interesting and fun, encouraging children's enthusiasm for learning. The environment supports teachers' motivation, and the ease of using ICT in learning is also a driver. Teachers revealed that ICT makes it easier to plan, implement and evaluate learning, and helps to find teaching materials effectively.

Factors that Hinder Teachers in Improving ICT Competencies to Support Learning Activities at SDN Se-Kecamatan Lawe Bulan Kabupaten Aceh Tenggara

Despite the efforts, motivation and support outlined above, it is undeniable that teachers often face barriers in improving their Information and Communication Technology (ICT) competencies. This study identified several factors that hinder teachers in their efforts to improve their ICT skills. These factors include inadequate ICT equipment facilities, teachers' limited knowledge of existing equipment and applications, and the lack of direct ICT training for teachers. This is reflected in one respondent's statement: "Inadequate or incomplete ICT equipment, and no training for teachers" (01.IP. 26). In line with the above statement, SN also stated that teachers' organizations, both at the sub-district and district levels, have never conducted ICT training to support learning activities during the eight years she has been teaching at SDN. SN's opinion can be seen in the following statement: "Inadequate support from teachers' organizations, especially in the form of ICT training that has never existed" (02.SN.. 18).

Other barriers relate to limited ICT knowledge and the uncertainty of having friends to discuss with. One respondent's statement confirms this: "I am not so fluent in using ICT, so I need to learn again and again, but there has been no training related to improving ICT for learning" (03.SA. 22). DI added that the existing facilities at school are considered inadequate by some teachers. Limited knowledge is also often a barrier in using applications for learning activities, so they are forced to find other solutions. This statement was presented as evidence: "The lack of facilities and having to share the use, sometimes I am confused about who to ask. The solution is that I look for information through Google, if I don't find the answer, I go to the photocopy rental. Training is also rarely held" (04.DI 26). Similar to DI, DW also perceived limited knowledge and lack of friends to discuss with as two obstacles in improving ICT competence. DW's statement can be seen below: "Because I am not an ICT graduate, my knowledge of ICT is very limited and I am self-taught. I only rely on tutorials

on YouTube, and there is no discussion space for teachers to share knowledge about using ICT in learning activities at SDN" (05.DW 22).

CONCLUSIONS

Teachers' ICT competence in supporting learning activities at SDN in Lawe Bulan District falls into the "Sufficient" category, as indicated by most respondents. While teachers actively improve their ICT skills through self-learning, peer discussions, and ICT training, the study finds no correlation between education level or tenure and ICT competence, suggesting that motivation and institutional support play a more significant role. Encouragement from principals, supervisors, and colleagues, along with school policies promoting ICT use, contributes to teachers' digital proficiency. However, challenges such as limited ICT training, inadequate facilities, outdated equipment, lack of peer collaboration, and insufficient knowledge of ICT tools and applications hinder progress. To enhance ICT competence, teachers need greater access to structured training, improved ICT resources, and a stronger support system to effectively integrate technology into their teaching practices.

REFERENCES

Amirudin, A. (2020). Pengaruh Modernisasi Terhadap Eksistensi dan Keberlangsungan Pengrajin Dandang di Desa Parapatan Kecamatan Sumberjaya Kabupaten Majalengka. *Etos*, *1*(1), 17-33.

Chung, W. S., Lin, C. L., Chang, S. N., Chung, H. A., Sung, F. C., & Kao, C. H. (2014). Increased risk of deep vein thrombosis and pulmonary thromboembolism in patients with spinal cord injury: a nationwide cohort prospective study. Thrombosis research, 133(4), 579-584.

Faizal, F. A. (2019). Pengetahuan Basic life support pada mahasiswa kedokteran tingkat pertama universitas sebelas maret terhadap pasien henti jantung mendadak. *Jurnal Universitas Sebelas Maret*.

Fauzi, F., & Siregar, M. H. (2019). Pengaruh Kompetensi dan Kinerja Karyawan terhadap Pengembangan Karir di Perusahaan Konstruksi. *Journal of Entrepreneurship, Management and Industry (JEMI)*, *2*(1), 9-21.

Helaluddin, H., & Alamsyah, A. (2019). Kajian konseptual tentang social-emotional learning (sel) dalam pembelajaran bahasa. *Al-Ishlah: Jurnal Pendidikan*, *11*(1), 1-16.

Julaeha, S., & Erihadiana, M. (2021). Model pembelajaran dan implementasi pendidikan HAM dalam perspektif pendidikan islam dan nasional. Reslaj: Religion Education Social Laa Roiba Journal, 3(3), 403-414.

Monica, R. A. I., Syahruddin, D., & Sutisna, M. R. (2020). Analisis Keterampilan Menceritakan Kembali Cerita Fiksi pada Siswa Kelas IV Sekolah Dasar. Jurnal Membaca Bahasa dan Sastra Indonesia, 5(2).

Nazha, F. C. (2019). Upaya Guru Dalam Meningkatkan Kemampuan Bahasa Anak Melalui Media Panggung Boneka Pada Anak Kelompok B TK Arrabitah Alkheiriyah (Doctoral dissertation, Institut PTIQ Jakarta).

Nejentsev, S., Howson, J. M., Walker, N. M., Szeszko, J., Field, S. F., Stevens, H. E., ... & Ouwehand, W. H. (2007). Localization of type 1 diabetes susceptibility to the MHC class I genes HLA-B and HLA-A. *Nature*, *450*(7171), 887-892.

Rusdan, R. (2020). Peningkatan Kompetensi Aparatur Birokrasi Pemerintah Mewujudkan Birokrasi yang Berkualitas. *Sosialita: Jurnal Ilmu Administrasi*, *15*(2), 536717.

Saryono, J. (2010). Implementasi kurikulum tingkat satuan pendidikan di Sekolah Menengah Pertama Aultan Agung Salaman Kabupaten Magelang (Doctoral dissertation, UNS (Sebelas Maret University)).

Tanjung, M. M. (2024). Pelaksanaan Proses Pembelajaran Berdasarkan Peraturan Menteri Pendidikan Dan Kebudayaan Nomor 103 Tahun 2014 Di Sekolah Dasar Negeri 200106/9 Kota Padangsidimpuan (Doctoral dissertation, UIN Syekh Ali Hasan Ahmad Addary Padangsidimpuan).

Wahyuni, E. S., & Nova, T. (2018). Analisis whistleblowing system dan kompetensi aparatur terhadap pencegahan fraud (Studi empiris pada Satuan Organisasi Perangkat Daerah Kabupaten Bengkalis). Inovbiz: Jurnal Inovasi Bisnis, 6(2), 189-194.