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The Impact of Social Environment on Juvenile Delinquency in Tanjung Baru Subdistrict

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ABSTRACT

In society, the phenomenon of juvenile delinquency is a serious concern because it can have a negative impact on individuals and their environment. One factor that is believed to play a role in the emergence of juvenile delinquent behavior is the social environment around them. Tanjung Baru sub-district, as an area that has certain social characteristics, is interesting to be the focus of research in identifying the impact of the social environment on juvenile delinquency. The main objective of this study is to analyze the impact of the social environment on juvenile delinquency in Tanjung Baru Sub-district. This study aims to determine the extent to which social environmental factors such as family, school, and peers affect the level of juvenile delinquency in the area. The methods to be used in this research are survey method and qualitative analysis. A survey will be conducted to collect data on the social characteristics of adolescents and their level of delinquency. In addition, in-depth interviews with teenagers, parents, teachers, and community leaders will be conducted to gain a deeper understanding of the social environmental factors that influence juvenile delinquency. The results of this study indicate a significant relationship between the social environment and the level of juvenile delinquency in Tanjung Baru Sub-district. Factors such as family disintegration, lack of supervision from parents, and negative influence from peers have a major contribution to the increase in juvenile delinquency in the area. Based on the results of the study, it can be concluded that the social environment plays an important role in shaping juvenile delinquent behavior. Therefore, efforts to reduce the level of juvenile delinquency in Tanjung Baru Sub-district should involve various parties, including families, schools, and local communities, to create a healthier environment and support positive adolescent development.

Keywords: *Juvenile Delinquency, Social Environment, Tanjung Baru*

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INTRODUCTION

Adolescence is one of the most important phases or levels of development in the stages of human development, because adolescence is a period of transition from childhood to early adulthood, characterized by the individual being sexually or psychologically mature. Every individual if he has passed the transition period from children to early adulthood and the individual is also mature both in terms of sexual and psychological terms, then the individual can be said to be an adolescent (Desmita, 2019).

According to Een, Tagela & Irawan (2020), adolescence is a transitional phase from childhood to adulthood. Adolescents are considered an integral part of the community because they are expected to be the successors of previous generations in realizing the ideals of the nation. Adolescence is often referred to as a transitional period characterized by significant changes in various aspects such as physical, intellectual, emotional, and social. In addition, adolescent development often shows progress, for example in the fields of education, mastery of skills, technological knowledge, and achievement. Adolescents grow and develop in the context of community life. In their social environment, adolescents engage in mutually influencing interactions, which often involve social conflicts.

In general, the age that can be said to be a teenager when the individual has reached the age of 13 to 21 years. When their ages range between that then they can be said to be teenagers and not children anymore, but still not fully accepted as adults. Adolescence when viewed from age, adolescence is divided into several groups or stages, the first stage or the first group is often referred to as early adolescence or pre-adolescence ranging in age from 10-13 years, the second stage or the second group is usually called middle adolescence ranging in age from 14-17 years, and the last group of adolescents or often called late adolescence ranging in age from 18-21 years (Ali and Asrori, 2016).

Teenagers are one of the groups in the environment of social life that has a very important role. Life in adolescence is classified as very interesting to study because adolescents are a generation which will be the next generation for life to come. Therefore adolescents are said to be the most valuable assets like gold and pearls so They are the ones who will have the greatest opportunity to become the next generation and will be the expected leaders for the future.

In adolescence, they have the potential to deviate, usually it will appear when they show their identity, it is not uncommon for adolescents to fall into deviant behavior so that they will commit deviant behavior. So that deviant behavior committed by adolescents is said to be juvenile delinquency. This behavior is influenced from the outside so that the teenager without thinking long takes these actions even though it is very detrimental to him.

Kartini Kartono (2008), Juvenile delinquency is a behavior or crime in which the perpetrator is a child in adolescence. Juvenile delinquency usually often occurs because these children or adolescents are caused by a form that affects them, be it in

the form of neglect from the social environment, so that they develop or show the wider community with deviant forms of behavior or those that are not in accordance with the rules and norms that are applied by children their age.

Sudarsono (2012), Juvenile delinquency is classified into a form of crime in which the crime is committed by the child and the crime will have a negative impact on him, be it psychologically on the child who committed the act or the child who became the perpetrator of the crime. Every individual who commits delinquency or who has fallen into deviant actions when his age is around adolescence, then it is classified as juvenile delinquency.

Santrock (2007), juvenile delinquency itself can occur because it is influenced by many factors including parents and the family environment, individual identity, individual age, peers, how the quality of the home environment and also the actions of individuals who are always closed. Parents and the family environment have a very important role for adolescents so that they do not fall into deviant things. The most influencing factor in the occurrence of delinquency is how the individual associates so that peers are called the strongest factor to fall into deviant actions.

So juvenile delinquency is one of the forms of deviant behavior, and juvenile delinquency also violates the rules of law and norms. Juvenile delinquency is carried out or the perpetrator is a child in adolescence, so that the juvenile delinquency they commit will have an impact on themselves and also other people will get the impact as well. Juvenile delinquency tends to be committed or the perpetrators are children who have reached adolescence compared to adults, and is accompanied by the influence of these individuals.

In adolescence where this period is very vulnerable to being influenced by anything both from within the individual and from the surrounding environment, because in adolescence they try as much as possible to show their identity, so they like to do a desire or a new thing, even though their activities or actions are contrary to the applicable rules.

Santrock (2007), Teenagers and delinquency have their own morality because usually the perpetrators of juvenile delinquency cannot heed the rules that apply in the environment. So that during the transition or transition from childhood to adulthood they will always evoke their personality or identity, usually they show in various ways, there is a way to play a role in showing naughty behavior patterns.

According to the theory put forward by Frued, the human person is formed from various impulses, and he put forward 3 systems in the formation of the so-called human person known as Id, Ego, and Super Ego. So this is what makes the principle for pleasure which has a function to channel energy and produce satisfaction. So with this Farued theory it can be concluded that humans are driven by desires so that these humans will experience satisfaction, and so are teenagers who commit delinquency, according to them with their urges they will get satisfaction even though it violates the rules and has gone out of its proper path.

Social environment refers to the area or place where a person lives to interact

and live with the surrounding community, including the family environment, school environment, and peer environment. Adolescents today are faced with various pressures and demands from the surrounding environment that may lead to various problems that they must overcome. Facing these problems with a positive attitude can help adolescents gain strength and maturity. However, when adolescents are in the process of finding their identity, they sometimes see problems as something scary, so they tend to avoid them, which makes them feel anxious.

The social environment is a factor that has the ability to influence individuals or groups to take action and change their behavior. The commonly known social environment includes the family environment, the school environment, and the social environment with peers. This theory is supported by Amsyari who explains that the social environment involves other individuals around him, such as neighbors, friends, and even people who are not yet known.

Sometimes, the social environment, without realizing it, can have a negative influence on teenagers, pushing them into unhealthy relationships. Today, observations suggest that today's socializing is different from the socializing of yesteryear. In this modern era, socializing tends towards deviant behavior, exceeding the boundaries of the prevailing norms. In the reciprocal relationship between individuals and their environment, the environment in its development is able to play a role and influence the learning process of students.

Based on initial observations and interviews with several informants, researchers also identified the phenomenon of juvenile delinquency in Tanjung Baru Sub-district. For example, there were teenagers who were arrested by the police for stealing manure and stealing avocados. In addition, based on information obtained from the community, other types of juvenile delinquency include speeding or wild racing, skipping school, and smoking behavior.

From the results of the initial survey, the researcher also assumed that juvenile delinquency in Tanjung Baru Sub-district could be caused by the lack of attention given to juveniles by the community environment, both from parents and other individuals close to the juvenile. In addition, unsupportive social environment factors are also considered to contribute. There is also an assumption that some people in Tanjung Baru Sub-district tend to be indifferent to the conditions of their community, which massively impacts on the behavior of adolescents, encouraging them to commit violations of laws and social norms. Based on this description, the researcher feels interested in carrying out further research with the title "The Impact of the Social Environment on Juvenile Delinquency in Tanjung Baru Sub-district."

RESEARCH METHODOLOGY

The method used in this research is field research using a qualitative approach. A qualitative approach is a research method related to the process of collecting and understanding information based on methodologies that explore and understand various facts or social phenomena and human problems. This is done through observation in the

field, followed by in-depth analysis, and efforts to develop theories based on observed findings (Burhan, 2007).

RESULT AND DISCUSSION

The definition of the word "impact" in the Complete Indonesian Dictionary is an effect that arises as a result of a shift or influence that brings consequences, either in the form of favorable or unfavorable results.

Simply put, impact can be defined as the result or consequence of an influence. Every decision taken by a leader has its own impact, both in positive and negative forms. Impact can also be a continuation of the implementation of internal control. A competent leader should be able to foresee the type of impact that may occur from a decision to be taken. Etymologically, impact refers to offense, collision, or impact.

It can be concluded that impact refers to any consequences that arise as a result of an event in society. Today, societies around the world are undergoing rapid changes, which bring about diverse impacts, both beneficial and detrimental to adolescents. Internal factors, such as the characteristics present in adolescents, mean that this period tends to be more turbulent than other stages of development.

These impacts consist of positive impacts and negative impacts.

Gunarsa (1981), Positive impact refers to efforts to persuade, convince, influence, or impress others with the aim that they support or follow one's wishes. Meanwhile, positive refers to something definite, firm, and real, especially in the context of paying attention to good things. Positivity reflects a state of mind that emphasizes creative activity over routine, cheerfulness over sadness, and optimism over pessimism. Positivity is a mental state that is maintained through a conscious effort to stay focused on favorable things when facing events, with the aim of avoiding negative thoughts. Individuals who have a positive mindset realize when their thoughts tend to be negative and attempt to recover immediately.

So, it can be concluded that positive affect refers to the urge to persuade, convince, influence or impress others, in the hope that they will join in or support a good cause. In the Big Indonesian Dictionary, negative impact is defined as a strong influence that brings about undesirable results. Meanwhile, impact itself refers to an attempt to persuade, convince, influence, or impress others in the hope that they will follow or support one's wishes.

Thus, the conclusion of the definition of negative impact is the urge to persuade, convince, influence, or impress others with the aim that they follow or support a bad cause, causing certain adverse consequences.

Social Environment

The social environment is a factor that has the ability to influence individuals or groups to take certain actions and change the behavior of each individual. Commonly known social environments include the family environment, peer environment, and neighborhood environment. The family is the social environment that is first recognized by individuals since birth.

According to Sartain as explained in Dalyono's book, the social environment refers to all individuals or other people who influence us. These influences can be direct, for example in daily interactions with other people, family, friends, coworkers, or friends at school. Meanwhile, indirect influences can come from mass media such as radio and television, through reading books, magazines, newspapers, and the like in various other ways.

Social environment refers to the place where a person lives and interacts with the surrounding community, such as family, school, and peer environment. Adolescents today face pressures and demands that can lead to problems that they need to deal with. Addressing these issues with a positive attitude can strengthen and help adolescents in their growth and maturity. However, in the process of self-discovery, there are times when adolescents perceive problems as frightening, leading to attempts to avoid them. This can actually increase anxiety in the adolescent.

So it can be concluded that the social environment acts as a place to interact with others, shape personal identity, and influence one's behavior. A positive social environment will have an impact on improving one's personality or behavior. The social environment does not operate separately, but rather is interrelated and synergizes in shaping human behavior.

Social environments can be divided into two categories:

Primary Social Environment refers to the type of social environment where there is a strong attachment between members, who know each other well. Secondary Social Environment is a type of social environment where the relationship between members is not as strong as the primary environment, there is often distance or lack of closeness between members.

According to Dalyono, the social environment consists of several parts, including peers, activities in the community, and the family environment.

Juvenile delinquency

According to Gunarsa (2004), juvenile delinquency occurs in adolescents who have a more negative self-view than adolescents who are not experiencing problems. Children who are raised in a less harmonious family environment and tend to become delinquent adolescents compared to adolescents who are raised in harmonious families and are optimistic about themselves.

Santrock (2007), juvenile delinquency itself can occur because it is influenced by many factors including parents and family environment, individual identity, individual age, peers, how the quality of the home environment and also the actions of individuals who are always closed. Parents and the family environment have a very important role for adolescents so that they do not fall into deviant things. The most influencing factor in the occurrence of delinquency is how the individual associates so that peers are called the strongest factor to fall into deviant actions.

According to several opinions from the figures above, juvenile delinquency is defined as the tendency of adolescents to commit acts that violate the rules that can cause harm and damage to both themselves and others.

According to Jensen (in Sarwono, 2012) juvenile delinquency can be divided into several parts. Here are four types of juvenile delinquency described in the classification, a). delinquency that causes physical harm to others, b). delinquency that causes material damage, c). Social delinquency that does not cause victims on the other side, d). Delinquency against status.

It can be concluded that the indications described above can reflect potential signs of the tendency of juvenile delinquency, but all of these indications are a prediction or diagnosis that is not certain to be possessed by the delinquent teenager.

Factors of Juvenile Delinquency

According to Papalia (2004), adolescents who are less supervised, guarded, given guidance, and cared for, especially mothers, tend to behave rebelliously or take actions that deviate from community norms.

According to Willis cited in Maulidya (2018), there are a number of factors that can be identified as triggers for juvenile delinquency. These factors can be classified into four groups, namely factors surrounding the family environment, internal factors of individual adolescents, factors of the surrounding community environment, and finally, factors of the school environment.

There are many factors that trigger juvenile delinquency, including those related to the family environment, which is the first place where human individuals are exposed to social interactions, starting from birth until they reach maturity. This is one of the factors that often occurs in cases of juvenile delinquency.

According to Gunarsa (2004), the causes of juvenile delinquency can be divided into two categories, a). personal factors, b). Family factors, c). Social environment and the dynamics of change.

According to Kartono (1985), some of the factors that cause juvenile delinquency are as follows: lack of parental affection, lack of parental supervision, association with friends who are not the same age, the influence of negative science and technology education, lack of personality guidance from schools, and lack of religious basis. the existence of media used to spread their hobbies and talents, the existence of excessive freedom, and the existence of pent-up problems. Because adolescents who do not receive attention and guidance from their parents will seek attention and guidance from peers and the environment outside the home, family and peer factors are the most important factors in causing juvenile delinquency.

CONCLUSION

Based on the title "The Impact of the Social Environment on Juvenile Delinquency in Tanjung Baru Subdistrict", it can be concluded that the social environment has a significant role in shaping juvenile delinquent behavior in the area. Through analysis of environmental factors such as family, school, and peers, it can be identified that these factors have different impacts on the level of juvenile delinquency. This conclusion suggests that it is important to improve the social environment in Tanjung Baru Sub-district in order to reduce the level of juvenile delinquency and

create a more supportive environment for the positive development of adolescents in the future.

REFERENCES

Abbas, J., Aman, J., Nurunnabi, M., & Bano, S. (2019). The Impact of Social Media on Learning Behavior for Sustainable Education: Evidence of Students from Selected Universities in Pakistan. *Sustainability*, *11*(6), 1683. https://doi.org/10.3390/su11061683

Albalawi, R., Yeap, T. H., & Benyoucef, M. (2020). Using Topic Modeling Methods for Short-Text Data: A Comparative Analysis. *Frontiers in Artificial Intelligence*, *3*, 42. https://doi.org/10.3389/frai.2020.00042

Alharbi, A. S. M., & de Doncker, E. (2019). Twitter sentiment analysis with a deep neural network: An enhanced approach using user behavioral information. *Cognitive Systems Research*, *54*, 50–61. https://doi.org/10.1016/j.cogsys.2018.10.001

Bankó, P., Lee, S. Y., Nagygyörgy, V., Zrínyi, M., Chae, C. H., Cho, D. H., & Telekes, A. (2019). Technologies for circulating tumor cell separation from whole blood. *Journal of Hematology & Oncology*, *12*(1), 48. https://doi.org/10.1186/s13045-019-0735-4

Binks, A. P., LeClair, R. J., Willey, J. M., Brenner, J. M., Pickering, J. D., Moore, J. S., Huggett, K. N., Everling, K. M., Arnott, J. A., Croniger, C. M., Zehle, C. H., Kranea, N. K., & Schwartzstein, R. M. (2021). Changing Medical Education, Overnight: The Curricular Response to COVID-19 of Nine Medical Schools. *Teaching and Learning in Medicine*, *33*(3), 334–342. https://doi.org/10.1080/10401334.2021.1891543

Bock, A., Modabber, A., Kniha, K., Lemos, M., Rafai, N., & Hölzle, F. (2018). Blended learning modules for lectures on oral and maxillofacial surgery. *British Journal of Oral and Maxillofacial Surgery*, *56*(10), 956–961. https://doi.org/10.1016/j.bjoms.2018.10.281

Bora, A., Balasubramanian, S., Babenko, B., Virmani, S., Venugopalan, S., Mitani, A., de Oliveira Marinho, G., Cuadros, J., Ruamviboonsuk, P., Corrado, G. S., Peng, L., Webster, D. R., Varadarajan, A. V., Hammel, N., Liu, Y., & Bavishi, P. (2021). Predicting the risk of developing diabetic retinopathy using deep learning. *The Lancet Digital Health*, *3*(1), e10–e19. https://doi.org/10.1016/S2589-7500(20)30250-8

Bryant, C., Szejda, K., Parekh, N., Deshpande, V., & Tse, B. (2019). A Survey of Consumer Perceptions of Plant-Based and Clean Meat in the USA, India, and China. *Frontiers in Sustainable Food Systems*, *3*, 11. https://doi.org/10.3389/fsufs.2019.00011

Budd, J., Miller, B. S., Manning, E. M., Lampos, V., Zhuang, M., Edelstein, M., Rees, G., Emery, V. C., Stevens, M. M., Keegan, N., Short, M. J., Pillay, D., Manley, E., Cox, I. J., Heymann, D., Johnson, A. M., & McKendry, R. A. (2020). Digital technologies in the public-health response to COVID-19. *Nature Medicine*, *26*(8), 1183–1192. https://doi.org/10.1038/s41591-020-1011-4

Chen, H., Guo, J., Wang, C., Luo, F., Yu, X., Zhang, W., Li, J., Zhao, D., Xu, D., Gong, Q., Liao, J., Yang, H., Hou, W., & Zhang, Y. (2020). Clinical characteristics and intrauterine vertical transmission potential of COVID-19 infection in nine

pregnant women: A retrospective review of medical records. *The Lancet*, *395*(10226), 809–815. https://doi.org/10.1016/S0140-6736(20)30360-3

Chick, R. C., Clifton, G. T., Peace, K. M., Propper, B. W., Hale, D. F., Alseidi, A. A., & Vreeland, T. J. (2020). Using Technology to Maintain the Education of Residents During the COVID-19 Pandemic. *Journal of Surgical Education*, *77*(4), 729–732. https://doi.org/10.1016/j.jsurg.2020.03.018

Debnath, R., Bardhan, R., Reiner, D. M., & Miller, J. R. (2021). Political, economic, social, technological, legal and environmental dimensions of electric vehicle adoption in the United States: A social-media interaction analysis. *Renewable and Sustainable Energy Reviews*, *152*, 111707. https://doi.org/10.1016/j.rser.2021.111707

Dutta, P., Choi, T.-M., Somani, S., & Butala, R. (2020). Blockchain technology in supply chain operations: Applications, challenges and research opportunities. *Transportation Research Part E: Logistics and Transportation Review*, *142*, 102067. https://doi.org/10.1016/j.tre.2020.102067

Dwivedi, Y. K., Hughes, D. L., Coombs, C., Constantiou, I., Duan, Y., Edwards, J. S., Gupta, B., Lal, B., Misra, S., Prashant, P., Raman, R., Rana, N. P., Sharma, S. K., & Upadhyay, N. (2020). Impact of COVID-19 pandemic on information management research and practice: Transforming education, work and life. *International Journal of Information Management*, *55*, 102211. https://doi.org/10.1016/j.ijinfomgt.2020.102211

Dziuban, C., Graham, C. R., Moskal, P. D., Norberg, A., & Sicilia, N. (2018). Blended learning: The new normal and emerging technologies. *International Journal of Educational Technology in Higher Education*, *15*(1), 3. https://doi.org/10.1186/s41239-017-0087-5

Feng, H., Wang, X., Duan, Y., Zhang, J., & Zhang, X. (2020). Applying blockchain technology to improve agri-food traceability: A review of development methods, benefits and challenges. *Journal of Cleaner Production*, *260*, 121031. https://doi.org/10.1016/j.jclepro.2020.121031

Fernandes, N., Costa, D., Costa, D., Keating, J., & Arantes, J. (2021). Predicting COVID-19 Vaccination Intention: The Determinants of Vaccine Hesitancy. *Vaccines*, *9*(10), 1161. https://doi.org/10.3390/vaccines9101161

Hart, C. M. D., Xu, D., Hill, M., & Alonso, E. (2021). COVID-19 and Community College Instructional Responses. *Online Learning*, *25*(1). https://doi.org/10.24059/olj.v25i1.2568

Huang, C., Huang, L., Wang, Y., Li, X., Ren, L., Gu, X., Kang, L., Guo, L., Liu, M., Zhou, X., Luo, J., Huang, Z., Tu, S., Zhao, Y., Chen, L., Xu, D., Li, Y., Li, C., Peng, L., … Cao, B. (2021). 6-month consequences of COVID-19 in patients discharged from hospital: A cohort study. *The Lancet*, *397*(10270), 220–232. https://doi.org/10.1016/S0140-6736(20)32656-8

Jabreel, M., & Moreno, A. (2019). A Deep Learning-Based Approach for Multi-Label Emotion Classification in Tweets. *Applied Sciences*, *9*(6), 1123. https://doi.org/10.3390/app9061123

Jacques, S., Ouahabi, A., & Lequeu, T. (2021). Synchronous E-learning in Higher Education during the COVID-19 Pandemic. *2021 IEEE Global Engineering Education Conference (EDUCON)*, 1102–1109. https://doi.org/10.1109/EDUCON46332.2021.9453887

Javaid, M., Haleem, A., Vaishya, R., Bahl, S., Suman, R., & Vaish, A. (2020). Industry 4.0 technologies and their applications in fighting COVID-19 pandemic. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, *14*(4), 419–422. https://doi.org/10.1016/j.dsx.2020.04.032

Johnston, J., Walshe, G., & Ríordáin, M. N. (2020). Supporting Key Aspects of Practice in Making Mathematics Explicit in Science Lessons. *International Journal of Science and Mathematics Education*, *18*(7), 1399–1417. https://doi.org/10.1007/s10763-019-10016-1

Kamilaris, A., Fonts, A., & Prenafeta-Boldύ, F. X. (2019). The rise of blockchain technology in agriculture and food supply chains. *Trends in Food Science & Technology*, *91*, 640–652. set-company-logo-design-ideas-vector.zip

Kaya & Bilge. (2019). Deep Metric Learning: A Survey. *Symmetry*, *11*(9), 1066. https://doi.org/10.3390/sym11091066

Kim, S. (2018). Public Service Motivation, Organizational Social Capital, and Knowledge Sharing in the Korean Public Sector. *Public Performance & Management Review*, *41*(1), 130–151. https://doi.org/10.1080/15309576.2017.1358188

Kirn, A., & Benson, L. (2018). Engineering Students' Perceptions of Problem Solving and Their Future. *Journal of Engineering Education*, *107*(1), 87–112. https://doi.org/10.1002/jee.20190

König, J., Jäger-Biela, D. J., & Glutsch, N. (2020). Adapting to online teaching during COVID-19 school closure: Teacher education and teacher competence effects among early career teachers in Germany. *European Journal of Teacher Education*, *43*(4), 608–622. https://doi.org/10.1080/02619768.2020.1809650

Kopnov, V. A., Shmurygina, O. V., Shchipanova, D. E., Dremina, M. A., Papaloizou, L., Orphanidou, Y., & Morevs, P. (2018). FUNCTIONAL ANALYSIS AND FUNCTIONAL MAPS OF QUALIFICATIONS IN ECVET CONTEXT. *The Education and science journal*, *20*(6), 90–117. https://doi.org/10.17853/1994-5639-2018-6-90-117

Kukulska-Hulme, A., & Viberg, O. (2018). Mobile collaborative language learning: State of the art: Mobile collaborative language learning. *British Journal of Educational Technology*, *49*(2), 207–218. https://doi.org/10.1111/bjet.12580

Li, W., Gillies, R., He, M., Wu, C., Liu, S., Gong, Z., & Sun, H. (2021). Barriers and facilitators to online medical and nursing education during the COVID-19 pandemic: Perspectives from international students from low- and middle-income countries and their teaching staff. *Human Resources for Health*, *19*(1), 64. https://doi.org/10.1186/s12960-021-00609-9

Liu, Y., Zhu, Y., & Cui, Y. (2019). Challenges and opportunities towards fast-charging battery materials. *Nature Energy*, *4*(7), 540–550. https://doi.org/10.1038/s41560-019-0405-3

Mahler, D., Großschedl, J., & Harms, U. (2018). Does motivation matter? – The relationship between teachers' self-efficacy and enthusiasm and students' performance. *PLOS ONE*, *13*(11), e0207252. https://doi.org/10.1371/journal.pone.0207252

McGrew, S., Breakstone, J., Ortega, T., Smith, M., & Wineburg, S. (2018). Can Students Evaluate Online Sources? Learning From Assessments of Civic Online Reasoning. *Theory & Research in Social Education*, *46*(2), 165–193. https://doi.org/10.1080/00933104.2017.1416320

Montero Perez, M., Peters, E., & Desmet, P. (2018). Vocabulary learning through viewing video: The effect of two enhancement techniques. *Computer Assisted Language Learning*, *31*(1–2), 1–26. https://doi.org/10.1080/09588221.2017.1375960

Oztemel, E., & Gursev, S. (2020). Literature review of Industry 4.0 and related technologies. *Journal of Intelligent Manufacturing*, *31*(1), 127–182. https://doi.org/10.1007/s10845-018-1433-8

Patra, J. K., Das, G., Fraceto, L. F., Campos, E. V. R., Rodriguez-Torres, M. del P., Acosta-Torres, L. S., Diaz-Torres, L. A., Grillo, R., Swamy, M. K., Sharma, S., Habtemariam, S., & Shin, H.-S. (2018). Nano based drug delivery systems: Recent developments and future prospects. *Journal of Nanobiotechnology*, *16*(1), 71. https://doi.org/10.1186/s12951-018-0392-8

Pierce, M., Hope, H., Ford, T., Hatch, S., Hotopf, M., John, A., Kontopantelis, E., Webb, R., Wessely, S., McManus, S., & Abel, K. M. (2020). Mental health before and during the COVID-19 pandemic: A longitudinal probability sample survey of the UK population. *The Lancet Psychiatry*, *7*(10), 883–892. https://doi.org/10.1016/S2215-0366(20)30308-4

Pikhart, M., & Klímová, B. (2020). eLearning 4.0 as a Sustainability Strategy for Generation Z Language Learners: Applied Linguistics of Second Language Acquisition in Younger Adults. *Societies*, *10*(2), 38. https://doi.org/10.3390/soc10020038

Podlewska, S., & Kafel, R. (2018). MetStabOn—Online Platform for Metabolic Stability Predictions. *International Journal of Molecular Sciences*, *19*(4), 1040. https://doi.org/10.3390/ijms19041040

Pouyanfar, S., Yang, Y., Chen, S.-C., Shyu, M.-L., & Iyengar, S. S. (2019). Multimedia Big Data Analytics: A Survey. *ACM Computing Surveys*, *51*(1), 1–34. https://doi.org/10.1145/3150226

Pujadas, G., & Muñoz, C. (2019). Extensive viewing of captioned and subtitled TV series: A study of L2 vocabulary learning by adolescents. *The Language Learning Journal*, *47*(4), 479–496. https://doi.org/10.1080/09571736.2019.1616806

Rao, S. K., & Prasad, R. (2018). Impact of 5G Technologies on Industry 4.0. *Wireless Personal Communications*, *100*(1), 145–159. https://doi.org/10.1007/s11277-018-5615-7

Rosenberg, H., & S. C. Asterhan, C. (2018). "WhatsApp, Teacher?"—Student Perspectives on Teacher-Student WhatsApp Interactions in Secondary Schools. *Journal of Information Technology Education: Research*, *17*, 205–226. https://doi.org/10.28945/4081

Scherer, R., Siddiq, F., & Tondeur, J. (2019). The technology acceptance model (TAM): A meta-analytic structural equation modeling approach to explaining teachers' adoption of digital technology in education. *Computers & Education*, *128*, 13–35. https://doi.org/10.1016/j.compedu.2018.09.009

Shamantha, R. B., Shetty, S. M., & Rai, P. (2019). Sentiment Analysis Using Machine Learning Classifiers: Evaluation of Performance. *2019 IEEE 4th International Conference on Computer and Communication Systems (ICCCS)*, 21–25. https://doi.org/10.1109/CCOMS.2019.8821650

Swidan, A., Hermans, F., & Smit, M. (2018). Programming Misconceptions for School Students. *Proceedings of the 2018 ACM Conference on International Computing Education Research*, 151–159. https://doi.org/10.1145/3230977.3230995

Theobald, E. J., Hill, M. J., Tran, E., Agrawal, S., Arroyo, E. N., Behling, S., Chambwe, N., Cintrón, D. L., Cooper, J. D., Dunster, G., Grummer, J. A., Hennessey, K., Hsiao, J., Iranon, N., Jones, L., Jordt, H., Keller, M., Lacey, M. E., Littlefield, C. E., … Freeman, S. (2020). Active learning narrows achievement gaps for underrepresented students in undergraduate science, technology, engineering, and math. *Proceedings of the National Academy of Sciences*, *117*(12), 6476–6483. https://doi.org/10.1073/pnas.1916903117

Torales, J., O'Higgins, M., Castaldelli-Maia, J. M., & Ventriglio, A. (2020). The outbreak of COVID-19 coronavirus and its impact on global mental health. *International Journal of Social Psychiatry*, *66*(4), 317–320. https://doi.org/10.1177/0020764020915212

Unsworth, L., & Mills, K. A. (2020). English language teaching of attitude and emotion in digital multimodal composition. *Journal of Second Language Writing*, *47*, 100712. https://doi.org/10.1016/j.jslw.2020.100712

Walther, J., Brewer, M. A., Sochacka, N. W., & Miller, S. E. (2020). Empathy and engineering formation. *Journal of Engineering Education*, *109*(1), 11–33. https://doi.org/10.1002/jee.20301

Wang, Y., Zhang, D., Du, G., Du, R., Zhao, J., Jin, Y., Fu, S., Gao, L., Cheng, Z., Lu, Q., Hu, Y., Luo, G., Wang, K., Lu, Y., Li, H., Wang, S., Ruan, S., Yang, C., Mei, C., … Wang, C. (2020). Remdesivir in adults with severe COVID-19: A randomised, double-blind, placebo-controlled, multicentre trial. *The Lancet*, *395*(10236), 1569–1578. https://doi.org/10.1016/S0140-6736(20)31022-9

Wehner, S., Elkouss, D., & Hanson, R. (2018). Quantum internet: A vision for the road ahead. *Science*, *362*(6412), eaam9288. https://doi.org/10.1126/science.aam9288

Yi, S., & Liu, X. (2020). Machine learning based customer sentiment analysis for recommending shoppers, shops based on customers' review. *Complex & Intelligent Systems*, *6*(3), 621–634. https://doi.org/10.1007/s40747-020-00155-2

Yu, X., Wang, C., & Zhou, X. (2018). A Survey on Robust Video Watermarking Algorithms for Copyright Protection. *Applied Sciences*, *8*(10), 1891. https://doi.org/10.3390/app8101891

Zhang, Q., Yang, L. T., Chen, Z., & Li, P. (2018). A survey on deep learning for big data. *Information Fusion*, *42*, 146–157. https://doi.org/10.1016/j.inffus.2017.10.006

Zhao, Y., Chen, X., & Yin, J. (2019). Adaptive boosting-based computational model for predicting potential miRNA-disease associations. *Bioinformatics*, *35*(22), 4730–4738. https://doi.org/10.1093/bioinformatics/btz297

Zhou, F., Yu, T., Du, R., Fan, G., Liu, Y., Liu, Z., Xiang, J., Wang, Y., Song, B., Gu, X., Guan, L., Wei, Y., Li, H., Wu, X., Xu, J., Tu, S., Zhang, Y., Chen, H., & Cao, B. (2020). Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: A retrospective cohort study. *The Lancet*, *395*(10229), 1054–1062. https://doi.org/10.1016/S0140-6736(20)30566-3