

Study habits and academic performance in Peruvian mining students, COVID-19 context

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Abstract

This study demonstrates the relationship between study habits and student's academic performance during COVID-19—approximately 113 students and 59 students, chosen non-probabilistically. The CASM-85 Study Habits Inventory was used to collect information by assessing these dimensions: ways of studying, homework resolution, knowledge exam preparation, ways of listening to class, and accompanying the study. Rho Spearman coefficient was used for the association and linear regression for the effect, registering: the above dimensions have a significant influence ($p < 0.01$) on academic performance ($r = 0.736$; $r^2 = 55.7\%$; $r = 0.767$; $r^2 = 58.9\%$; $r = 0.664$; $r^2 = 44.1\%$; $r = 0.635$; $r^2 = 40.4\%$; $r = 0.689$; $r^2 = 47.5\%$; $r = 0.641$; $r^2 = 41.0\%$). Study habits and their elements should be encouraged to enhance the academic performance of mining students.

Keywords: Teaching methods; Teacher effectiveness; Student evaluation; COVID-19, Habits Inventory.

I. Introduction

The epidemic outbreak of COVID-19 has disrupted life worldwide since the end of 2019, transforming education in all its stages and processes. Thus, many countries suspended face-to-face teaching, directly or indirectly affecting learners' academic performance (T. Gonzalez, De la Rubia, et al., 2020). This transformation, on the one hand, forced teachers to adapt to a new complex educational scenario and, on the other hand, forced students to make adjustments in their study habits so that they could achieve their academic goals in a problematic scenario; adopting new ways of studying that influence the results and educational effectiveness (Méndez-Aguado et al., 2020). For this reason,

the contribution of teachers and their educational role in this pandemic scenario was revalued, as well as their ability to adapt to work with new technological supports necessary to manage information, communication, educational quality, and knowledge in times of pandemic (Maryani et al., 2020); (Morissan, 2020). Despite this, a recent study, which sampled 30,383 students from 62 countries, revealed that, in the pandemic context, some students showed deficiencies in computer skills with decreased academic performance in the new virtual environment (Aristovnik et al., 2020). On the other hand, coupled with the closure of higher education institutions during the pandemic, different modes of e-learning were implemented using multiple virtual platforms to achieve the goals

suggested in the global education sector (Wang & Zhao, 2020), so students and faculty found themselves in virtual classrooms where some had frustrations and concerns regarding their online learning, while others had outstanding experiences (Rasiah et al., 2020).

In Peru, the strategies for confronting COVID-19 followed the global dynamic to the letter: the government established compulsory social confinement, which affected all social configurations. Thus, to maintain continuity in academic work, virtuality was necessary for all its forms and potentialities. On the one hand, the entire national teaching profession needed to unlearn and detach itself from its traditional practices and insert itself into a disruptive pedagogical process. Their teaching commitment to stimulate distance learning for students via virtual learning has been commendable in this sense. On the other hand, students entered a process of adaptation in which, to achieve the same or better results than before the pandemic, they also needed to transform their ways of learning, and one of the ways to accomplish this was by modifying their study habits to enable them to adapt to the new educational scenario, demonstrating a capacity for transformation and self-improvement.

The proposed study is relevant to the problem because its results will derive the relevance of decision-making for implementing reinforcement programs aimed at the higher education student population on variables and their elements as a concrete social contribution. Also, it synthesizes the relationship between study habits and academic performance in mining students in the context of COVID-19. Methodologically, an updated study habits measurement instrument is used, which has been validated and made reliable.

Previous studies supporting this research emphasize the increased use of remote systems implemented during COVID-19 in clinical, educational, and scientific meeting activities (Kuchenbuch et al., 2020). Likewise, the contribution of a group of Filipino teachers who exercise virtual alternative forms of teaching in the training of their students such as e-learning practice, professional communication, adherence to quarantine requirements mixed with purposeful activities; all recommended coping with anxiety and stress (Talidad & Toquero, 2020). Similarly, it was found that students must adapt to

new learning roles through information technology to succeed academically during health emergencies (Qazi et al., 2020). Moreover, in this situation, most students have adapted to e-learning, with mobile devices to attend e-learning, causing some related problems such as depression due to poor connectivity (Kapasia et al., 2020). Faced with these situations, applications such as WhatsApp and Telegram increased to support the teaching and learning process. However, the complicated selection of an ideal virtual tool for teaching and learning puts virtuality at a disadvantage compared to the conventional education system (Kumar et al., 2020).

The COVID-19 drastically reoriented the traditional learning strategies to a more novel, innovative and disruptive approach. Therefore, this redirection puts on the shoulders of teachers and learners a great transformational challenge. That will need to appeal to the most modern educational strategies where teaching methods converge the teacher's effectiveness in the circumstances and the learner's attitude to the study as essential pillars for quality academic training; since these elements affect the evaluation and academic performance of students (T. Gonzalez, de la Rubia, et al., 2020).

Based on the factual and theoretical arguments put forward previously, the research question was formulated: To what extent do study habits influence the academic performance of students in the first cycle of the Mining Exploitation study program of the Institute of Higher Technological Education of the province of Pataz (IESTP-Pataz), in the context of COVID-19? The purpose of this study was to demonstrate the existing relationship between study habits and the academic performance of Mining students in the context of COVID-19. As a hypothesis of the research, it was pointed out that study habits positively affect the academic performance of mining students in the time of health emergency.

2. Literature review

2.1. COVID-19 containment affects students' academic success in higher education

In the year 2020, the coronavirus COVID-19 epidemic wreaked havoc on people all over the world. The COVID-19 pandemic, like every other field, had a wide range of effects on education. Government decisions have aimed to

avoid the risks of coronavirus through enacting physical contact restrictions. Most states have halted face-to-face instruction and tests, as well as imposed limits on immigration. Traditional classrooms have been replaced with books and supplies from school wherever needed (Teresa Gonzalez et al., 2020).

Teachers and students can communicate through various e-learning channels, and in some instances, national TV programs or social networking sites are also used for teaching. To help plan for this distance e-learning situation, several educational systems have declared memorable vacations. There are several gaps in the influence of the COVID-19 disease outbreak on various countries' educational systems. The initiate and end dates of academic years and the scheduling of school holidays all contribute to this absence of uniformity. Although some countries banned in-person lessons without further notice, others were less stringent, advising colleges to limit face-to-face instruction and substitute it with digital alternatives when possible. Based on the education system, the beginning of the spring term may be postponed in certain circumstances. Surprisingly, various research resources are ready to assess the online teaching and learning obstacle presented by the COVID-19 disease outbreak. It is simple to imagine changing material traditionally demonstrated face-to-face using such tools (Teresa Gonzalez et al., 2020).

Further critical aspects of the education process, along with evaluation or self-directed learning, can be challenging without teachers' active direction. Both of these debates lead to the same conclusion: how to ensure that assessments are made. These rarely measuring students' progress. Consequently, how could professors equate candidates' performance if they vary from previous years' results? On the one side, if students obtain higher results than in the last years, this may be due to online test cheating or improvements in the format of the assessment tools. Alternatively, average students may be due to a shift in the grading method or autonomous learning as not a successful teaching tool (Teresa Gonzalez et al., 2020).

2.2. Impact of e-learning

This research aims to decrease confusion in the higher education evaluation process during the

COVID-19 disease outbreak. The rapid development of the internet and information technology has had a considerable impact on E-learning. Teachers will be able to acquire new e-learning tools to make tests more accessible, and learners will engage in classes. Scientific innovation has been shown to support both assessment methods and self-evaluation. Also, programs that only have online material, including MOOCs (Massive Open Online Courses), can be beneficial (MOOCs) have become more common these days. With e-Learning resources usage in higher education, a larger volume of data can be examined, resulting in better teaching efficiency. In recent years, many studies have been conducted to explore the opportunities and challenges of large volumes of data analysis in secondary education (Teresa Gonzalez et al., 2020).

For instance, Gasevic et al. stated that time management strategies substantially associate with educational success. Jovanovic et al. also showed that facilitating learners with the control of their learning resources is essential for adequately handling their educational approach in terms of regularity. The COVID-19 disease outbreak boosted the use of remote working, e-learning, video streaming, and other similar technologies on a large scale in just a few days. The most common remote collaboration tools are private chat messages, two-participant calls, multi-person meetings, and team chat messages. There are also some suggestions to assist teachers in online instruction (Teresa Gonzalez et al., 2020).

Moreover, for some students with limited technical capital, mobile learning has emerged as a viable option. Regarding student reviews on e-classes, some research shows that students were pleased with the teacher's teaching style and that the critical issue was weak internet access (Teresa Gonzalez et al., 2020).

2.3. Mobile learning

Furthermore, mobile learning has become an alternative suitable for some students with fewer technological resources. Regarding the feedback of e-classes given by students, some studies point out that students were satisfied with the teacher's way of delivering the lecture. The main problem was the poor internet connection. Considerable research has been carried concerning independent learning and the idea of self-regulated learning (SRL), where some learners are

involved and accountable for their learning process, along with informed, self-aware, and empowered to choose their learning approach (Teresa Gonzalez et al., 2020).

2.4. Reopening of school

In the COVID-19 disease outbreak, the construction of appropriate methods for learner assessment and self-evaluation has become essential to ensure successful performance in e-learning environments. To halt the emergence of the COVID-19 disease outbreak, several governments worldwide have temporarily closed schools. Numerous others have started distance learning programs and are planning for rehabilitation, which entails more than just reopening the gates and accepting students (Carvalho et al., 2020).

There are chances for policymakers to develop policies and "start rebuilding better" during the response. However, policies are being constructed in the face of massive uncertainty. In this framework, curriculum policies are incredibly challenging. However, it will be most effective if it is: (1) guided by actual rigorous evidence; (2) addressed with a long-term perspective that prioritizes agility, communication, and trust; and (3) implemented with a long-term perspective that prioritizes flexibility, interaction, and confidence. (4) Adaptable to new data and knowledge gathered through community interaction and analysis. The public's confidence in the government is essential for a successful reopening and recovery. Trust can be established and sustained by involving communities to prepare for the reopening and communicating clearly across reputable networks (Carvalho et al., 2020).

A prosperous and inclusive restarting and recovery needs critical resource management, which depends on broad teamwork, efficient targeting, and ongoing data analysis to adapt and strengthen strategies. Decision-makers would want access to information to support their preparation and decision-making and draw on appropriate prior knowledge. This brief outlines the best available evidence for allocating resources to the most pressing needs and suggests three policy steps to consider. As schooling reopens, candidates, teachers, and households will face new demands on their time and money, making enrolment difficult for some families. Governments must launch enrollment campaigns and

propose further steps to help the process back to schools, such as cash transferences and school meals for most helpless students (Carvalho et al., 2020).

3. Methodology

This research has a quantitative approach, with a non-experimental, cross-sectional, descriptive, correlational, causal, and explanatory scope. The population consisted of 113 students between 17 and 32 years of age, enrolled in the I, III, and V cycles of study, first semester 2020 in the program of studies of Mining Exploitation of the IESTP-Pataz, Peru, 2020. The sample was selected by non-probabilistic purposive sampling of 59 students (52.21% of the population). To measure the academic performance, the data source was the grading register, which is legally valid to guarantee the student's success in the different subjects of the higher-level curriculum, in which the names and surnames of the student, registration code, didactic units of each cycle and their respective grades are detailed.

3.1. Data collection

The technique for collecting and storing data was the survey from the application of the CASM- 85 Study Habits Inventory instrument (Vicuña Peri, 2014), which five dimensions: Dimension 1: ways of studying (12 items), Dimension 2: homework resolution (10 items), Dimension 3: knowledge exam preparation (11 items), Dimension 4: ways of listening to class (12 items) and Dimension 5 study accompaniment (8 items). A total of 53 items with 3 response options: Never = 0, Sometimes = 1 and Always = 2. Likewise, the instrument was applied to a pilot sample, with whose data the validity was carried out with confirmatory factor analysis with KMO of sampling adaptation = 0.741 and sig. < 0.01 with 72.761% accumulated the total variance explained by five components with average homogeneity values: Ways of studying '0.7368', homework resolution '0.6603', knowledge exam preparation '0.8014', ways of listening class '0.642', Study accompaniment '0.537'. Continuing with the calculation of reliability with Cronbach's alpha with α Ways of studying = 0.860, α Homework resolution = 0.856, α Knowledge exam preparation = 0.853, α Ways of listening to class = 0.854 and α Accompanying study = 0.860.

The students collected the information via Google Forms with the CASM-85 Study Habits Inventory form (Vicuña Peri, 2014). The students were informed of the reasons for the evaluation, the voluntary nature of their participation in the research, and the confidentiality of their responses. Before the survey application, a tutorial was carried out to learn how to complete the survey, which was sent individually by e-mail. The data were entered into the SPSS v. 24 programs. Then the validity analysis was carried out with confirmatory factor analysis and reliability with Cronbach's Alpha; the descriptive part with the prescription of levels and analysis of frequencies and percentages of the variables and

sub-variables; the normality test was carried out, identifying that the variables with their dimensions detect a non-parametric distribution (some sig. <0.05). Therefore, the Rho Spearman statistical test was applied in the inferential part to measure correlations with significance ($p < 0.05$); linear regression was used to measure the impact of study habits on academic performance.

4. Results

4.1. Levels and dimensions of study habits

Levels	Dimensions									
	Forms of study		Homework resolution		Knowledge exam preparation		Ways of listening to class		Accompaniment to the study	
	fi	%	fi	%	fi	%	fi	%	fi	%
Low	13	22,0	38	64.4	38	64.4	21	35.6	43	72.9
Half	30	50.8	15	25.4	5	8.5	22	37.3	16	27.1
High	16	27.2	6	10.2	16	27.1	16	7.1	0	0.0
Total	59	100	59	100	59	100	59	100	59	100

Table 1. Levels and dimensions of study habits, COVID-19 context

As can be seen in Table 1, learners are most supreme in the low level in the dimension study accompaniment (72.9%, 43), homework resolution (64.4%, 38), knowledge exam preparation (64.4%, 38), forms of listening in the medium

level (37.3%, 22) and forms of study are most supreme in the medium level (50.8%, 30).

4.2. Levels of academic performance

Levels	Academic Performance	
	f	%
Deficient (0-10)	17	28.8
Regular (11-13)	26	44.1
Good (14-17)	16	27.1
Excellent (18-20)	0	0.0
Total	59	100

Table 2. Levels of academic achievement, COVID-19 context

The students, as shown in Table 2, are located with the most significant hegemony in the Regular level of the academic performance variable

(44.1%, 26) and Poor level (28.8%, 17), followed by Good level (27.1%, 16). There are no students at the excellent level.

4.3. Relationship between study habits and academic performance

Rho Spearman correlation	Academic Performance
Forms of study	0.803**
	0.000
Homework resolution	0.586**
	0.000
Knowledge exam preparation	0.507**
	0.000
Ways of listening to class	0.686**
	0.000
Accompaniment to the study	0.625**
	0.000
Study habits	0.736**
	0.000

Table 3. Relationship between study habits and academic performance, COVID-19 context

Table 3 shows the existence of a highly significant relationship between study habits, ways of studying, homework resolution, knowledge exam preparation, modes of listening to class,

study accompaniment, and academic performance ($r = 0.736^{**}$; $r = 0.803^{**}$; $r = 0.586^{**}$; $r = 0.507^{**}$; $r = 0.686^{**}$; $r = 0.625^{**}$; $\forall p < 0.01$).

Model	R	R-square	Adjusted squared	R-	Error estándar de la estimación
Study habits	0.747 ^a	0.557	0.550		1.316
Forms of study	0.767 ^a	0.589	0.582		1.268
Homework resolution	0.664 ^a	0.441	0.432		1.478
Knowledge exam preparation	0.635 ^a	0.404	0.393		1.527
Ways of listening to class	0.689 ^a	0.475	0.466		1.433
Accompaniment to the study	0.641 ^a	0.410	0.400		1.519

4.4. Predictors of study habits on academic performance

Table 4. Predictors of study habits and sub-variables in academic performance, COVID-19 context

As can be seen in table 4, study habits, ways of studying, homework resolution, Knowledge exam preparation, ways of listening to class, study accompaniment significantly favour academic performance whose values are ($r^2 = 55.7\%$; $r^2 = 58.9\%$; $r^2 = 44.1\%$; $r^2 = 40.4\%$; $r^2 = 47.5\%$; $r^2 = 41\%$; $\forall p < 0.01$).

5. Discussion

The results regarding study habits show that, in times of pandemic, learners are located with greater supremacy in the low level in the dimension study accompaniment (72.9%, 43), homework resolution (64.4%, 38), knowledge exam preparation (64.4%, 38), ways of listening to class in the medium level (37.3%, 22) and ways of studying are located with greater supremacy in the medium level (50.8%, 30). Therefore, innovative vocational guidance should be employed, strengthening teachers' development, growth, integration, and cooperation for the benefit of learners (Fernandez & Shaw, 2020). As well as prioritizing positive aspects such as study support, distraction, test preparation, concentration dosage, workload, solving problems of technological coverage and internet, and increasing support from instructors to reverse some recurring negative aspects in times of pandemic (Hussein et al., 2020). In this regard, a survey of China's leading medical schools using WeChat found high satisfaction levels with the effectiveness of online teaching. Sixty-four percent of the faculty gave positive responses and conceptualized COVID-19 as a great opportunity to develop technological and diversified education (Cheng et al., 2021). However, recent studies corroborate that, in the pandemic context, students have felt that e-learning has not proven excellent hem with a better experience and productivity in mastering competencies, especially in knowledge exam preparation and study support, due to a lack of motivation towards learning (Syauqi et al., 2020), that the majority of students rate on-campus education because, during the pandemic and under the virtual modality, they have experienced a multifactorial deterioration in their overall academic performance (Langegård et al., 2021). Therefore, it is

relevant to make strategic decisions such as improving the information and communication infrastructure, establishing clear guidelines such as many classes per day, duration of classes, breaks between sessions, curriculum appropriate to the pandemic situation. Along with all of the particular objectives of improving the retention capacity of the content (Singh et al., 2021) that will improve the students' academic performance.

Regarding academic performance, along standard level is Regular (44.1%) and Poor (28.8%), followed by Good (27.1%). There were no Mining students at the excellent level. This decrease in pandemic time had a substantial impact on the students, causing significant psychological burnout. One study, which aimed to assess factors associated with psychological distress in medical students during forced home quarantine, found that higher scores on the Rosenberg Self-Esteem Scale (RSES) correlated with lower levels of psychological distress (Arima et al., 2020). Another study recommended implementing programs to improve study habits, taking into account all aspects of study habits and not just focusing on study techniques and methods (Cede et al., 2020). Further research indicated that teachers in the Philippines tested e-learning strategies to overcome stress and develop good study habits needed to increase academic performance in the COVID-19 context (Talidadong & Toquero, 2020).

Also, a highly significant relationship was found between study habits, study methods, homework resolution, knowledge exam preparation, ways of listening to class and monitoring the study with academic performance ($r = 0.736^{**}$, $p < 0.01$ high positive relationship; $r = 0.803^{**}$, $p < 0.01$ high positive relationship; $r = 0.586^{**}$, $p < 0.01$ mean positive relationship; $r = 0.507^{**}$, $p < 0.01$ mean positive relationship; $r = 0.686^{**}$, $p < 0.01$ relationship high positive; $r = 0.625^{**}$, $p < 0.01$ high positive relationship). Study habits, ways of studying, homework resolution, knowledge exam preparation, ways of listening to class, study accompaniment, significantly favor academic performance ($r^2 = 55.7\%$; $r^2 = 58.9\%$; $r^2 = 44.1\%$; $r^2 = 40.4\%$; $r^2 = 47.5\%$; $r^2 = 41\%$; $\forall p < 0.01$). Researchers argue that although online teaching-learning modes have been extended in the COVID-19 context, human qualities such as attitude, motivation, self-efficacy, and the use of technology have been put

into practice simultaneously, determining vehicles in cognitive engagement and academic performance (Aguilera-Hermida, 2020); (Mishra et al., 2020). Other researchers warn of the need to work on study habits from the moment they begin their higher studies. For this, strategies with clear objectives must be designed. Also, short, medium, and long-term goals must be identified, contributing to these habits and contributing to avoid student desertion in the face of possible negative academic results (Montes-Valer, 2020). Finally, the academic results in times of pandemic allow us to affirm the influence and importance that study habits have on academic performance, becoming a determining aspect in higher education (Soto, & Rocha, 2020) or in situations such as the current global pandemic.

6. Conclusions

The purpose of this study was to demonstrate the relationship between study habits and the academic performance of mining students in the context of COVID-19. It presents a non-experimental, descriptive correlational, causal design. A population of 113 students and a sample of 59 students chosen by the non-probabilistic selection were reported. The instrument used to collect information was the CASM-85 Study Habits Inventory, which assesses the following dimensions: ways of studying, homework resolution, knowledge exam preparation, ways of listening to class, and accompanying study. The Rho Spearman coefficient was used for the association, and linear regression was used for the effect. Related to study habits, a low level was found in the dimensions Accompaniment to study (72.9%, 43), task resolution (64.4%, 38), exam preparation (64.4%, 38), ways of listening at the level medium (37.3%, 22) and forms of study are situated with greater supremacy in the medium level (50.8%, 30). To remedy this situation, it is necessary to deploy a set of strategies that favor the study's accompaniment, the students' concentration, the problems attributable to the mishandling of ICT, and the levels of student satisfaction; in short, fostering confidence in (e-learning). At the same time, the teacher must innovate their pedagogical practice to energize the students' experience in the current context.

Concerning academic performance, they showed that the students are placed with the

most significant hegemony in the Regular level (44.1%) and Poor level (28.8%), followed by the Good level (27.1%). There were no students at the excellent level. To improve these results, it is not enough to implement the strategies mentioned in the previous paragraph. It is necessary to delve deeper into the psychological wear and tear that students have been experiencing in the COVID-19 context, which generates emotional consequences that affect academic performance. Due to its importance, it must be diagnosed with the vision of offering possible alternative solutions. The highly significant relationship between study habits (forms of study, task resolution, exam preparation, ways of listening, study accompaniment) with the academic performance of IESTP-Pataz students in virtual learning environments in times of pandemic. It responds to a need to think about the pedagogical exercise from a strategic perspective in which students will need to adapt, unlearn and assume reality with optimism. While the teacher, from an innovative pedagogical configuration, will need to design the appropriate strategies so that this significant relationship (study habits - academic performance) is a constant in a spiral throughout the educational teaching process. Study habits, study forms, resolution of tasks, preparation of exams, ways of listening, and accompaniment to the study; significantly favor students' academic performance.

References

- [1] Aguilera-Hermida, P. (2020). College students' use and acceptance of emergency online learning due to COVID-19. *International Journal of Educational Research Open*, 1(August), 100011. <https://doi.org/10.1016/j.ijedro.2020.100011>
- [2] Arima, M., Takamiya, Y., Furuta, A., Siriratsivawong, K., Tsuchiya, S., & Izumi, M. (2020). Factors associated with the mental health status of medical students during the COVID-19 pandemic: A cross-sectional study in Japan. *BMJ Open*, 10(12), 1-7. <https://doi.org/10.1136/bmjopen-2020-043728>
- [3] Aristovnik, A., Keržič, D., Ravšelj, D., Tomaževič, N., & Umek, L. (2020). Impacts of the COVID-19 pandemic on

- life of higher education students: A global perspective. *Sustainability (Switzerland)*, *12*(20), 1–34. <https://doi.org/10.3390/su12208438>
- [4] Carvalho, S., Rossiter, J., Angrist, N., Hares, S., & Silverman, R. (2020). Planning for School Reopening and Recovery After COVID-19. *Center for Global Development*.
- [5] Cede, J. G., Alarc, B. E., & Miele-v, J. C. (2020). *Ciencias sociales Artículo de investigación*. *6*, 276–301.
- [6] Cheng, X., Chan, L. K., Cai, H., Zhou, D., & Yang, X. (2021). Adaptions and perceptions on histology and embryology teaching practice in China during the Covid-19 pandemic. *Translational Research in Anatomy*, *24*, 100115. <https://doi.org/10.1016/j.tria.2021.100115>
- [7] Fernandez, A. A., & Shaw, G. P. (2020). Academic Leadership in a Time of Crisis: The Coronavirus and COVID-19. *Journal of Leadership Studies*, *14*(1), 39–45. <https://doi.org/10.1002/jls.21684>
- [8] Gonzalez, T., de la Rubia, M. A., Hincz, K. P., Comas-Lopez, M., Subirats, L., Fort, S., & Sacha, G. M. (2020). Influence of COVID-19 confinement in students' performance in higher education. *ArXiv, April*. <https://doi.org/10.35542/osf.io/9zuac>
- [9] Gonzalez, T., De la Rubia, M. A., Hincz, K. P., Comas-Lopez, M., Subirats, L., Fort, S., & Sacha, G. M. (2020). Influence of COVID-19 confinement on students' performance in higher education. *PLoS ONE*, *15*(10 October), 1–23. <https://doi.org/10.1371/journal.pone.0239490>
- [10] Gonzalez, Teresa, De La Rubia, M. A., Hincz, K. P., Comas-Lopez, M., Subirats, L., Fort, S., & Sacha, G. M. (2020). Influence of COVID-19 confinement on students' performance in higher education. *PloS One*, *15*(10), e0239490.
- [11] Hussein, E., Daoud, S., Alrabaiah, H., & Badawi, R. (2020). Exploring undergraduate students' attitudes towards emergency online learning during COVID-19: A case from the UAE. *Children and Youth Services Review*, *119*(August), 105699. <https://doi.org/10.1016/j.childyouth.2020.105699>
- [12] Kapasia, N., Paul, P., Roy, A., Saha, J., Zaveri, A., & Mallick, R. (2020). *Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID- 19 . The COVID-19 resource centre is hosted on Elsevier Connect , the company ' s public news and information . January*.
- [13] Kuchenbuch, M., Onofrio, G. D., Wirrell, E., Jiang, Y., & Dupont, S. (2020). *Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID- 19 . The COVID-19 resource centre is hosted on Elsevier Connect , the company ' s public news and information . January*.
- [14] Kumar, G., Singh, G., Bhatnagar, V., Gupta, R., & Upadhyay, S. K. (2020). Outcome of online teaching-learning over traditional education during covid-19 pandemic. *International Journal of Advanced Trends in Computer Science and Engineering*, *9*(5), 7704–7711. <https://doi.org/10.30534/ijatcse/2020/113952020>
- [15] Langegård, U., Kiani, K., Nielsen, S. J., & Svensson, P. A. (2021). Nursing students' experiences of a pedagogical transition from campus learning to distance learning using digital tools. *BMC Nursing*, *20*(1). <https://doi.org/10.1186/s12912-021-00542-1>
- [16] Maryani, E., Rahmawan, D., & Karlinah, S. (2020). The implications of social media on local media business: Case studies in Palembang, Manado and Bandung. *Jurnal Komunikasi: Malaysian Journal of Communication*, *36*(1), 317–333. <https://doi.org/10.17576/JKMJC-2020-3601-18>
- [17] Méndez-Aguado, C., Aguilar-Parra, J. M., Álvarez, J. F., Trigueros, R., & Fernández-Archilla, J. A. (2020). The influence of emotions, motivation and habits in the academic performance of primary education students in french as a foreign language. *Sustainability (Switzerland)*, *12*(6). <https://doi.org/10.3390/su12062531>
- [18] Mishra, L., Gupta, T., & Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International*

- Journal of Educational Research Open*, 1, 100012.
<https://doi.org/10.1016/j.ijedro.2020.100012>
- [19] Montes-Valer, R. E. (2020). Hábitos de estudio y ansiedad en estudiantes andragogos. *Propósitos y Representaciones*, 8(2).
<https://doi.org/10.20511/pyr2020.v8n2.560>
- [20] Morissan. (2020). The influence of smartphone use on academic performance among indonesian university students. *Jurnal Komunikasi: Malaysian Journal of Communication*, 36(3), 83–101.
<https://doi.org/10.17576/JKMJC-2020-3603-06>
- [21] Qazi, A., Naseer, K., Qazi, J., Alsalman, H., & Naseem, U. (2020). *Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID- 19 . The COVID-19 resource centre is hosted on Elsevier Connect , the company ' s public news and information . January.*
- [22] Rasiah, R., Kaur, H., & Guptan, V. (2020). Business continuity plan in the higher education industry: University students' perceptions of the effectiveness of academic continuity plans during COVID-19 pandemic. *Applied System Innovation*, 3(4), 1–21.
<https://doi.org/10.3390/asi3040051>
- [23] Singh, H. K., Joshi, A., Malepati, R. N., Najeeb, S., Balakrishna, P., Pannerselvam, N. K., Singh, Y. K., & Ganne, P. (2021). A Survey of E-Learning Methods in Nursing and Medical Education During COVID-19 Pandemic in India. *Nurse Education Today*, 104796.
<https://doi.org/10.1016/j.nedt.2021.104796>
- [24] Soto, W., & Rocha., N. (2020). Hábitos de estudio: factor crucial para el buen rendimiento académico. *Revista Innova Educación*, 2(3).
- [25] Syauqi, K., Munadi, S., & Triyono, M. B. (2020). Students' perceptions toward vocational education on online learning during the COVID-19 pandemic. *International Journal of Evaluation and Research in Education*, 9(4), 881–886.
<https://doi.org/10.11591/ijere.v9i4.20766>
- [26] Talidong, K. J. B., & Toquero, C. M. D. (2020). Philippine Teachers' Practices to Deal with Anxiety amid COVID-19. *Journal of Loss and Trauma*, 25(6–7), 574–579.
<https://doi.org/10.1080/15325024.2020.1759225>
- [27] Vicuña Peri, L. A. (2014). *Inventario de hábitos de estudio CASM 85-R-2014* (1st ed.). Grafi-K-Gr.
- [28] Wang, C., & Zhao, H. (2020). The Impact of COVID-19 on Anxiety in Chinese University Students. *Frontiers in Psychology*, 11.
<https://doi.org/10.3389/fpsyg.2020.01168>