

Will Generative AI Make Us Stupid or Smart?

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Generative AI (GenAI) applications—especially those based on large language models like Gemini—are now ubiquitous, and their adoption rate is increasing. They represent the most advanced technology ever developed, matching or surpassing human performance in many complex tasks. As GenAI becomes embedded in our daily lives, it becomes crucial to understand its effects on how we think. I plan to explore how GenAI influences our cognitive processing, specifically by encouraging System 1 thinking, which is fast, associative, and automatic, vs. System 2 thinking, which is slower, resource-intensive, and deliberative.¹ I propose a series of experiments in which participants are randomly assigned to engage with a GenAI-chatbot or traditional web search in a judgment task. I then evaluate the effect of using GenAI on the quality of users' thinking and responses. This research will (1) examine whether interacting with GenAI encourages System 1 thinking, or if, alternatively, these interactions free up cognitive resources, allowing for increased System 2 processing; (2) identify the key mediators and moderators of this effect; and (3) develop interventions (i.e., changes to the GenAI user interface) that encourage more System 2 thinking when engaging with AI. This research will help elucidate how GenAI interactions shape our thinking, which will enable better alignment between GenAI systems and users.

Fifteen years ago, The Atlantic published an essay that went viral. It was titled “Is Google making us stupid?,” and it argued that the convenience of internet search was reducing people’s capacity for deep, critical thinking.² With the benefit of hindsight, it is clear that search engines did not spell the end of complex human thought, but rather made information more easily accessible. The rise of generative artificial intelligence now raises the question: “Is *GenAI* making us stupid?”

Without doubt, interacting with digital technologies can shape how we think. For instance, students randomly assigned to take notes on laptops perform worse on conceptual questions than students who take notes longhand³. Similarly, the use of search engines has been shown to influence memory processes. Even when directed to remember facts, we are more likely to forget them if we know they will be accessible in a computer; and may better remember *where* to access information rather than the information itself⁴. With long term use, technological tools can shape our brains. For example, drivers who use GPS more often have worse hippocampal dependent spatial memory during self-guided navigation, both cross-sectionally and longitudinally.^{5,6}

The advent of GenAI. Generative AI refers to programs capable of generating seemingly new, meaningful content such as text, images, or audio.⁷ For instance, you can ask Gemini to make a recommendation about U.S. budget allocations to foreign aid and, within seconds, receive a complete answer—not just a specific percentage of the budget but an eloquent and internally consistent essay justifying that proposal. Google Search, in contrast, generates a rank-ordered list of websites which you must visit individually, and process and integrate yourself to come to a conclusion.

Researchers are beginning to analyze the effects of GenAI tools in the workplace,^{8–10} and results are mixed. Studies have sampled different kinds of work tasks, including writing,⁸ customer support,⁹ idea generation, and product innovation¹⁰. In studies where tasks are simpler (e.g., customer support calls⁹), using generative AI improves performance—especially for users at the bottom of the performance distribution. In more complex tasks, however, GenAI

use leads to higher error rates¹⁰. Similarly, an analysis of 150 million lines of code, shows that since the inception of GenAI coding assistants, written code is more likely to be repeated, violating principles of code maintainability¹¹.

System 1 vs. System 2 cognition. Dual-process theories^{1,12,13} provide a useful theoretical framework for understanding the beneficial vs. deleterious effects of generative AI on human judgment and decision making. These models posit that the mind has two ways of coming to judgments. System 1, characterized by associative pattern matching, is fast, effortless, and intuitive, underpinning our unconscious, automatic processes. In contrast, System 2 is deliberative, embodying our conscious, slow, and effortful cognitive activities that are more critical and reflective in nature. Take the following problem: A bat and a ball cost \$1.10. The bat costs \$1 more than the ball. What is the price of each item. Your System 1 intuition might be that the bat costs \$1 and the ball 10 cents. If you work out the algebra step by step, your System 2 would realize that the only values that satisfy the equation are \$1.05 and 5 cents. While there is debate regarding the details and the validity of this approach,^{14–17} it is undeniable that when encountering problems, we sometimes think deeply, and sometimes do not.

What determines whether System 2 will become engaged? One contemporary account¹⁸ posits that when formulating a judgment, System 1 produces intuitions and estimates the certainty of those intuitions. Certainty is lower when there are conflicting intuitions or when no intuition is strongly activated. If certainty exceeds a critical threshold, then a purely System 1 intuitive response will be produced. If, however, certainty drops below that threshold, System 2 is activated. In that case, the results of System 2 feed back into System 1, which in turn leads to the revision of the activation strengths of its intuitions and their certainty.

Often, System 1 yields correct answers more efficiently than System 2. Take for instance chess masters, who are able to intuit the right move, even though they have no better general working memory and search for plays no more extensively than novices.¹⁹ Experts given repeated opportunities to learn from feedback develop intuitions that are more accurate than amateurs who deliberate on the same problems.²⁰ More generally, relying on “fast and frugal” thinking can be adaptive.^{21–23}

On the other hand, relying on System 1 intuitions can also lead us astray.¹ System 2 deliberation is generally preferred when: a judgment is consequential, there is time available for deliberation, we are not an expert in the domain, and we cannot easily delegate the judgment to an expert²⁴. Consider, for example, making the diagnosis of a complex medical condition, deciding on the strategic plan for a new tech venture, or judging the strengths and weaknesses of a potential new hire. Blindly accepting GenAI’s suggestions may in complex cognitive tasks lead to suboptimal results.

How might interactions with GenAI influence system 1 vs. System 2 cognition. One possibility is that interactions with GenAI may encourage more System 2 thinking. Specifically, quick and complete answers to our questions may free up working memory, a rate-limiting necessity for System 2 deliberation^{1,25,26}. In one study, taxing working memory by asking participants to remember a dot

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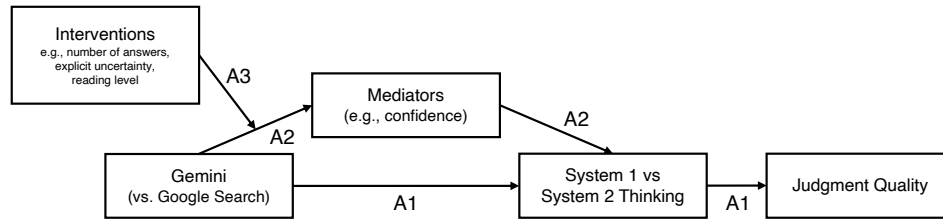


Fig. 1. Specific aims. Aim 1 (A1) seeks to establish the effect of GenAI interaction on System 1 vs System 2 thinking and judgement quality. Aim 2 (A1) explores the mediators of the effect. Aim 3 (A3) develops interventions to foster more System 2 thinking when engaging with GenAI.

pattern worsens performance on the Cognitive Reflection Task, a measure of System 2 (vs. System 1) thinking²⁷.

Alternatively, GenAI may encourage more System 1 thinking. Specifically, by producing answers that are complete and easy to process, GenAI may increase the user's estimate of the certainty of the GenAI response, a cue that *discourages* System 2 deliberation.^{28,29} This possibility is consistent with prior research showing that we are more likely to unquestioningly accept something as true when it is more easily processed—a phenomenon known as fluency bias^{30,31}.

As shown in **Figure 1**, this proposal has three main objectives. In Aim 1, I will conduct a series of experiments comparing how using generative AI, relative to traditional web search, influences System 1 vs. System 2 thinking and the downstream consequences of these shifts on users' judgement quality and persuasiveness. In Aim 2, I will explore the psychological mechanisms by which generative AI changes the way we think. Finally, in Aim 3, I will design and test interventions to encourage GenAI users to engage System 2 thinking. Collectively, findings from these studies deepen understanding of the cognitive consequences of our evolving GenAI landscape and inform efforts to align GenAI technologies with users' most valued goals.

Aim 1: How does GenAI influence System 1 vs. System 2 thinking and judgment quality?

To establish whether interacting with GenAI encourages automatic (System 1) or deliberative (System 2) thinking, I will conduct a series of experiments in which adults and university students are randomly assigned to use either traditional web search (i.e., Google Search), or a GenAI chatbot (e.g., Gemini) to complete common judgment tasks. Following previous research³², the extent of System 2 (vs. System 1) thinking will be measured by the time and effort users devote to produce their final judgments. The quality of users' final judgments will be assessed using third-party raters (both human and GenAI) or objective criteria (e.g., Brier scores).³³ In at least some of these studies, I will assess the degree of effortful cognitive processing via pupillometry^{34–36} at the Wharton Behavioral Lab.

The basic procedure is shown in **Figure 2**. Participants will

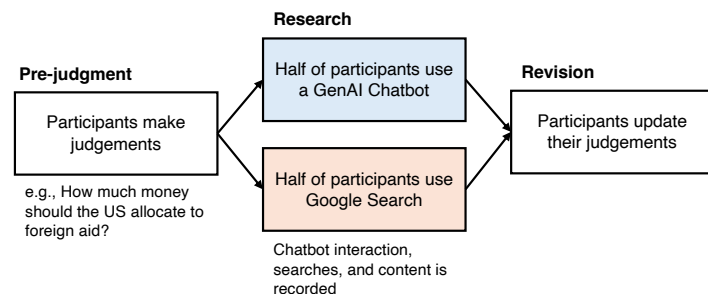


Fig. 2. Experimental task

be asked to make a judgment on a topic (e.g., how much money should the U.S. government allocate to foreign aid?) and to write a short justification thereof. They will then be randomized to learn more about the topic, either by using Google or by interacting with a GenAI-chatbot like Gemini. Finally, all participants will be given the opportunity to revise their judgment and justification. I intend to use stimulus sampling³⁷ to make sure that results are not unique to a particular judgment task and GenAI model. See **Table 1** for a potential list of tasks, spanning judgment, decision, and forecasts.

Task Type	Example Tasks	Quality Metric
Recommendation	How much money should the U.S. government allocate for aid?	Human and GenAI raters
Forecast	How likely is it that the Russia-Ukraine conflict ends within the next year?	Brier Scores
Reasoning	Given this company's 5-year history (see case study for details), what is the most likely cause of its bankruptcy?	Human and GenAI raters

Table 1. Proposed judgement, forecasting, and decision tasks

To adequately power studies, I am working under the assumption that differences would be in the range of $.10 < d < .20$, which implies a sample size of between 395 and 1,570 participants in each condition to achieve power of 0.80.

Aim 2: What psychological mechanisms explain the influence of GenAI on System 1 vs. System 2 thinking?

In an overlapping set of experiments, I will in Aim 2 examine psychological mediators (e.g., feelings of fluency and certainty,²⁸) that explain the effect observed in Aim 1.

Extending the methodology outlined in Aim 1, I will measure these mediators in two ways:

- User Perceptions.** Users will report how they perceived their interaction with the GenAI chatbot and the search websites.
- Natural Language Processing.** I will use natural language processing to identify psychologically-relevant features of GenAI responses that explain reduced deliberation (e.g., readability³⁸, tentativeness³⁹).

Aim 3: What interventions can promote System 2 deliberation?

Leveraging insights from Aims 1 and 2, I will in Aim 3 develop and test interventions that encourage System 2 thinking when engaging with GenAI. For example, prompting GenAI to offer multiple and conflicting perspectives may encourage System 2 thinking by reducing user's subjective sense of certainty.

These interventions will target interface design and/or user interaction.

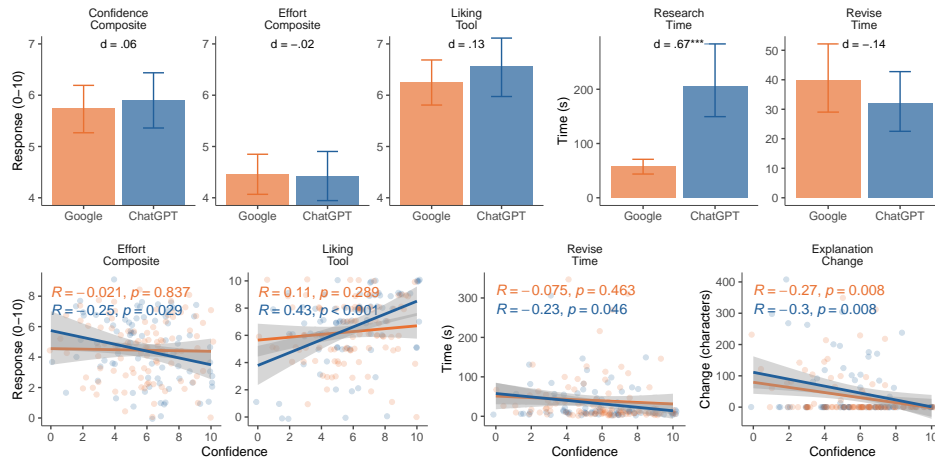


Fig. 3. Differences in user perceptions and engagement time of Google Search vs. Chatbot users in a judgment task. Correlations between closure and liking and effort metrics. REPLACE WITH CERTAINTY

- Interface design.** For example, prompting the GenAI chatbot to offer more than a single answer, explicitly model uncertainty, or write in differing levels of complexity might lead users to engage with more System 2 thinking.
- User interaction.** For example, users may be given strategies that are, ironically, similar to prompts we now give GenAI bots to generate more thoughtful, analytic answers. For instance, users may be asked to *make a plan before you give an answer, consider multiple solutions, write a pre-mortem plan on why your response could be wrong, etc.*

I compare the effectiveness of strategies aimed at users as well as the interface design. This line of work will be useful for designers building GenAI applications for situations where more deliberation is effective.

Pilot Data

As shown in **Figure 3**, preliminary pilot data ($N = 178$ adults) support the hypothesis that interacting with GenAI encourages System 1 thinking.

Participants provided a recommendation on the U.S. budget to foreign aid, were then randomly assigned to conduct research for as long as they wanted to using Google Search or a GenAI chatbot*. Participants then returned and were able to revise their original recommendations, and their reasoning behind them.

Compared to participants who used Google search, participants assigned to the GenAI-chatbot spent 24% less time fewer seconds writing their revised response ($d = 0.14$), and reported exerting about the same effort ($d = 0.02$), despite having had done research for about four times as long ($d = 0.71^{***}$). Participants liked using the chatbot for research more than they did Google Search ($d = 0.13$), and they liked GenAI more when they felt it produced more certainty ($r = .43^{***}$). In GenAI users, certainty, in turn, predicted less self-reported effort ($r = -.25^*$), less revision time ($r = -.23^*$), and smaller changes to their answers ($r = -.30^{**}$).

Conclusion

The proposed research will illuminate how the rapidly changing capabilities of generative artificial intelligence will shape human cognition. From a **theoretical perspective**, it will elucidate

some mechanisms that—with or without GenAI— prompt more automatic vs. more deliberative thinking. Additionally, it will inform the cognitive mechanisms behind the mixed effects of AI-augmentation on workplace performance^{8–10}. In more **practical terms**, my findings will enable managers, individuals, and policymakers to harness GenAI's potential to enhance, rather than diminish, our cognitive capacities.

If this proposal is successful, it will open new avenues for research. Specifically:

Short-term spillover effects. First, do cognitive changes persist on an unrelated task immediately after the GenAI interaction is over?

Long-term effects on cognitive style. Second, does repeated interaction with GenAI produce enduring changes in cognitive style and learning motivation—and is the influence of GenAI greater for developing minds who grow up with GenAI tools vs. adults who did not?

Generalizability. Third, how does GenAI compare to other ways in which people get information, such as social media or face-to-face human interaction? Would the results generalize to engaging with GenAI through other interfaces such as smart email clients and word processors?

Will Gemini make us stupid? This proposal offers one way to think about how generative artificial intelligence will influence human cognition. However, it is just the beginning. The real questions are: when do these tools encourage us to be more deliberative and when do they do the opposite? What determines the direction of this effect? And how can we proactively craft tools that align our long-term interests with the short-term incentives of interacting with them? In other words: How can Gemini make us smart?

*Based on GPT-4. Future work will compare chatbots built using different large language models, including Gemini and LLaMa.

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1. Will Gemini Make Us Stupid? - 1000 Character Abstract

Generative AI (GenAI) applications based on large language models like Gemini are now ubiquitous. As AI becomes embedded in our daily lives, it becomes crucial to understand how it influences how we think. I propose a series of experiments where participants are assigned to do research with an AI-Chatbot or traditional web search to explore how AI influences System 1 thinking, which is fast, associative, and automatic, vs. System 2 thinking, which is slower, resource-intensive, and deliberative. I plan to (1) establish whether the ease with which AI responses are processed encourages System 1 thinking, or whether the reduced cognitive load allows for increased System 2 processing; (2) identify the key mediators that drive this effect; and (3) develop interventions—targeting user interaction and interface design—that encourage more System 2 thinking. This research is pivotal for optimizing AI design to enhance user cognition and decision-making.

2. Describe the desired impact your research will make on the field and society, and why this is important to you. Include any personal, educational and/or professional experiences that have motivated your research interests.

I was already a grownup when smartphones and social media came along. I remember how exciting it felt to be in touch with friends and family members who lived many miles away. Today, this early excitement has given way to concern. I am constantly distracted by my phone. Social media drives political polarization around the world. Young people, especially girls, face mental health issues. A lively conversation after dinner is often replaced with sitting side-by-side staring into our phones and ignoring each other.

As we integrate ever more powerful generative AI (GenAI) into our daily lives, the lessons learned from past innovations weigh heavily on my mind. I often find myself chatting with GenAI models for leisure and work. Many of these interactions are fulfilling. Often, Gen AI helps me solve pressing problems in an instant, and sometimes I am surprised at how much I learn in the process. Other times, however, I find myself interacting with GenAI passively—lazily letting it tell me what to think or write, and thoughtlessly accepting its first suggestion.

More than we consciously realize, the way we think and behave is heavily dependent on the structure of our environments (Barker, CITE). This means that the way in which we design and engage with AI will determine whether it elevates our capacities for thought and engagement or the opposite.

Ultimately, I hope my research will help guide GenAI designers and users towards enriching human capabilities rather than inadvertently diminishing them. By understanding the mechanisms of how AI systems shape the way we think, we will be able to design interventions that help GenAI surface the best of us. My hope is that this knowledge will help steer our developing AI landscape closer to one where we can do more with our brains rather than less.

3. Describe an example of your leadership experience in which you have positively influenced others, helped resolve disputes or contributed to group efforts over time. (A leadership role can mean more than just a title. It can mean being a mentor to others, acting as the person in charge of a specific task, or taking the lead role in organizing an event or project. Think about what you accomplished and what you learned from the experience. What were your responsibilities? Did you lead a team? How did your experience change your perspective on leading others? Did you help to resolve an important dispute at your school, church, in your community or an organization? And your leadership role doesn't necessarily have to be limited to school activities. For example, do you help out or take care of your family?).

Without a fair bit of luck, I would not be where I am today. Very few graduates of Peruvian universities are admitted to PhD programs at world-class institutions. Language and culture aside, Peruvian scholars who dream of becoming scientists at the cutting edge don't have access to meaningful research experiences, and local universities lack the Ivy League pedigree.

I now have mentorship, resources, and opportunities beyond the wildest dreams of the boy I was growing up. I feel especially beholden to help those who—in one way or another—look like an earlier version of myself. My hope is that they, too, will benefit from an environment where their talents can be expressed. I have taken opportunities to advance this goal with undergraduate researchers and students navigating the graduate admission process, both from Peru and the US.

I have been lucky to work closely with undergraduate students exploring what psychological research looks like. At first, I was tempted to intervene too much, too soon. I quickly realized that my role was to make suggestions, provide feedback, and some support.

Likewise, I've been enriched by learning from PhD applicants. Providing feedback on their research statements and conducting mock interviews with them has allowed them to expand my own views. My questioning and probing have allowed them to refine their research programs.

It's easy to think that leadership is only about propelling a project forward by telling people what needs to be done. These experiences have taught me that leadership is often much more about listening, empathy, and connecting meaningfully with others. I am only powerful to help others when I listen to them, ask questions rather than give answers, and help others untangle their thoughts on their own.

I certainly put in a lot of effort and perseverance in getting to where I am. I was also extremely lucky. I hope I can contribute a little so that others from backgrounds like mine, might rely a little less on luck and more on a supportive community that I strive to nurture.

4. Student CV and Supervisor CV (1 page)

See attached.

5. Transcripts

See attached.

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Interests

Artificial Intelligence
Self-Regulation

Motivation
Non-Cognitive Skills

Education

- 2021 – 2026 University of Pennsylvania
PhD in Psychology
Advisor: Dr. Angela Duckworth
- 2015 – 2017 Universidad de Lima, Peru
Professional Licensure in Psychology
Thesis Topic: Parental predictors of children's effortful control
Thesis Advisor: Carolina Camino, M.A.
- 2009 – 2015 Universidad de Lima, Peru
B.A., Psychology. GPA 4.0 (18.6/20)
Class Rank: 1st out of 40 psychology graduates
- 2013 Katholieke Universiteit Leuven, Belgium
Exchange student in master level courses
Relevant courses: Education, Society and Culture, Cognitive Science, Artificial Intelligence
6 courses (29 credits)

Grants and Awards

- 2018 Annual research competition winner, Pontificia Universidad Católica del Perú
Awarded to the Motivation and Emotion Research Group (PUCP).
Basic Psychological Needs in the Context of Poverty
Grant Award: 135 000 and 45 000 PEN (53,576 USD)
- 2010 – 2015 Full honors scholarship, Universidad de Lima
Est. Value: 146 523 PEN (43,612 USD)

Academic Positions

- 2020 **Predoctoral Visiting Scholar**, University of Pennsylvania
Duckworth Lab, PI: Angela Duckworth
PSYC 005-401: Grit Lab (TA)
- 2017 – 2019 **Instructor**, Pontificia Universidad Católica del Perú
PSB229: Motivation and Emotion
2019 – 2: Enrollment 27. 2018 – 1: Enrollment 26.
2019 – 1: Enrollment 51. 2017 – 2: Enrollment: 16.

PSG207: Psychological Test Construction
2018 – 1: Enrollment 49. 2017 – 2: Enrollment 51.

PSG204: Psychological Research
2017 – 2: Enrollment 28.

Guest Lecturer

- 2018 Universidad Cayetano Heredia. Cognitive Behavioral Intervention Methods
- 2021 University of Pennsylvania. Self-concordant Goals.

Publications

[Google Scholar](#)

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- Putnam, S. P., Sehic, E., French, B. F., Gartstein, M. A., **Lira, B.**, & Peltola, M. (2024). The Global Temperament Project: Parent-Reported Temperament in Infants, Toddlers and Children from 59 Nations. *Developmental Psychology*.
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Submitted

- Lira, B., Bartlett, Maria. E., Kautz, T., & Duckworth, A. L. (2024). Remote Schooling Depresses Grades for the Most Vulnerable. *PNAS Nexus* [\[link\]](#)
- Matos, L., Herrera, D., Lira, B., Gargurevich, R., Benita, M. Perceived Teaching Styles, Basic Psychological Needs, Motivation, Engagement, Academic Achievement and Student Well-Being in a Peruvian in a low socioeconomic students' sample. Manuscript submitted for publication.

In Prep

- Lira, B., & Duckworth, A. L. What I see my role models do: Elucidating the mechanisms of reference bias. In preparation for *Psychological Methods*. [\[link\]](#)
- Lira, B., ... Gross, J., & Duckworth, A.L., Delivering motivational interventions at scale using Artificial Intelligence in Khan Academy.
- Lira, B., & Duckworth, A.L., Attention is the missing element of Expectancy Value Theories

Press coverage

- Duckworth et al., (2021) Students Attending School Remotely Suffer Socially, Emotionally, and Academically [\[HealthDay\]](#)[\[U.S. News\]](#)[\[The 74\]](#)[\[District Administration\]](#)[\[Yahoo\]](#)[\[Phys Org\]](#)

Presentations

- Ungar, L., Lira, B., Using Large Language Models to Help People be their 'Best' Selves. (2023, November) Psychology of Technology Conference. UC Berkeley. [\[link\]](#)[\[slides\]](#)
- Lira B.**, Seraj, S., Neiderhoffer, K., Ireland, M., (2023, February) Panel on collaboration between industry and academia. Language Preconference, Society for Personality and Social Psychology Convention. Atlanta.
- Chalén, J., **Lira B.**, & Herrera, D. (2022, July). Future Orientation, Wellbeing, Life Purpose & Academic Performance in University Students from Lima [Symposium]. 5th International Conference on Time Perspective. Vilnius, Lithuania (Virtual). [\[link\]](#)[\[link2\]](#)
- Lira, B.**, O'Brien, J., Peña, P., Galla, B. M., D'Mello, S., Yeager, D. S., Defnet, A., Kautz, T., Munkacsy, K., & Duckworth, A. L. (2022, July). Large Studies Reveal How Reference Bias Limits Policy Applications of Self-Report Measures. In C.J. Soto (Chair), *Conceptualization, Assessment, and Implications of Social, Emotional, and Behavioral Skills* [Symposium]. European Conference on Personality 2022, Madrid, Spain.
- Lira B.**, et al. (2021, September). Students Attending School Remotely Suffer Socially, Emotionally, and Academically. In B. Gill & E. Stuart (Chairs), *Mental and Physical Health Implications of School Operating*

Approaches During the COVID-19 pandemic [Symposium]. Society for Research on Educational Effectiveness Conference 2021. [\[link\]](#)

- Lira, B.** (2018, May). The predictive role of parental emotion regulation, empathy, and alexithymia on preschooler's effortful control [Poster presentation]. 22nd Occasional Temperament Conference (OTC). Murcia, Spain.
- Lira, B.** (2016, November). *Self-regulation and its impact in and out of the classroom* [Presentation]. Self-Regulation Seminar: Cerebrum. Puerto Varas, Chile. [\[link\]](#)
- Lira, B.** (2016, September). *Educational neuromyths in Latin America* [Conference Session]. Fifth Peruvian Society for Educational Research Conference (SIEP) Seminar. Ayacucho, Peru. [\[link\]](#)
- Lira, B.** (2016, September). *The importance of cognitive regulation in the classroom* [Presentation]. Self-regulation Seminar: Cerebrum. Medellin, Colombia. [\[link\]](#)
- Lira, B.** (2015, March). *Neurodiversity and Inclusion in Education* [Panel participant]. International Seminar on Neurodiversity: Cerebrum. Lima, Peru. [\[link\]](#)

Technical Skills

Programming: Qualtrics, R, SPSS, Factor, MPlus, MLWin, Psychopy

Statistical Methods: Exploratory and confirmatory factor analysis, multilevel modelling, structural equation modelling, cluster analysis, polynomial regression with response surface analysis (RSA), nonparametric regression methods including logistic, poisson, and negative binomial regression, and machine learning methods including tress, random forests, penalized regression, boosting, support vector machines, deep learning, neural networks, autoencoders, generalized mixture models, k-means, reinforcement learning, text modelling (transformers, LDA, naïve bayes).

Work Experience

- 2020 – **Visiting scholar**, Duckworth Lab, University of Pennsylvania
Duckworth Lab, PI: Angela Duckworth
- Participated in all aspects of the research process: conceptualization, data collection, data analysis, writing, submission and revision.
 - Mentored an undergraduate researcher and a group of high-school interns.
 - Designed activities for an undergraduate course on motivation.
 - Designed and taught a series of lessons on statistical analysis using R.
- 2016 – 2020 **Research assistant**, Pontificia Universidad Católica del Perú
Motivation and Emotion Research Group. Projects:
- Basic psychological needs and poverty
 - Maternal autonomy support
 - Basic psychological need support and thwarting and engagement in school and university
 - Autonomy support intervention program
 - Need support and thwarting in competitive sports
- 2015 – 2017 **Lead research analyst**, Cerebrum
- Was responsible for research and intervention programs.
 - Taught and supervised graduate students' theses.
 - Wrote articles for the education community.
 - Participated in conferences.
 - Developed content for graduate courses in educational neuroscience.
- 2016 **Statistical consultant**, EVACP Consulting
- Carried out psychometric and statistical analysis for a social program impact evaluation for the Peace Corps in Peru.
- 2015 – **Thesis advisor**
- Coached and supported +30 undergraduate and graduate students from Universidad de Lima, Pontificia Universidad Católica del Perú, Universidad Peruana de Ciencias Aplicadas in multiple stages of their thesis projects.
- 2014 – 2015 **Research and educational psychology intern**, Cerebrum
- Created an intervention program for the development of self-regulation and executive function and designed a tool to evaluate its impact.
 - Developed content for graduate courses in educational neuroscience.
- 2013 **Assistant to Ricardo Braun Ph.D.**, Universidad de Lima
- Edited and reviewed a book manuscript about the philosophy of the mind.

2012

Assistant to Sandra Inurritegui Ph.D., Universidad de Lima

- Designed the methodology, developed experiments, and coordinated school logistics.

Languages

Spanish: Native

English: Advanced

German: Basic

Additional Education

Foundations of Data Analysis – Part I. University of Texas at Austin. MOOC.

The Analytics Edge. MITx. MOOC.

Quantitative Biology Workshop. MITx. MOOC

Additional Projects

- [#Investigatips](#). Video library explaining research methods and statistics. +55K video views. (In Spanish)
- Statistics for Psychologists with R. A series of self-guided tutorials and practice sets exploring common data manipulation, visualization, and analysis tasks in R. Collaboration with Chayce Baldwin
- [R Package](#). Custom functions for ordinal alpha, Mahalanobis outlier detection, discriminant validity analysis, and data simulation.
- [Natural Language Processing Tools](#). Custom R and Python functions and tutorials for Natural Language Processing in the Social Sciences.
- R Programming. [Web application](#) to predict grape harvest dates and volumes based on weather and agricultural data.

Community Service

- Volunteer for the program Un Techo Para Mi País, building houses after the Chinchipe 2007 earthquake. Constructed 5 houses for the benefit of 5 families.
- Volunteer for CPDI, a malnutrition prevention center in Pampamarca. Worked with the community to generate appropriate strategies to promote healthy eating habits.
- One hundred and fifty hours of service in the IB-CAS program: building homes, tutoring children, among other service labors.
- Volunteer for the Peruvian Ministry of Education. Conducted interviews with teachers and principals regarding the effectiveness of feedback received by schools after the Census Student Evaluation.

Organizational Involvement

Member of Colegio de Psicólogos del Perú (National Association of Psychologists of Peru). CPsP. 31816

Test Scores

Graduate Records Examination (GRE) – Nov 14, 2019.

Verbal: 169 (99th Pc.), Quantitative: 166 (89th Pc.), Analytical Writing: 5.5 (98th Pc.)

Test of English as a Second Language (TOEFL): 119/120 – Sept 28, 2019.

Writing: 30, Speaking: 29, Reading: 30, Listening: 30.

References

Angela Duckworth

Professor Psychology

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Dora Herrera

Ph.D. in Psychology

diherrer@pucp.edu.pe

Angela L. Duckworth

Education

UNIVERSITY OF PENNSYLVANIA (2002–2006)

MA, PhD in Psychology

UNIVERSITY OF OXFORD (1994–1996)

MSc with Distinction in Neuroscience

HARVARD COLLEGE (1988–1992)

AB *magna cum laude* in Advanced Studies Neurobiology

Current Positions

Rosa Lee and Egbert Chang Professor, University of Pennsylvania (2020–current)

Character Lab Co-Founder, Chief Scientist, and Board Member (2015–current)

Selected Publications

- Lira, B., Gardner, M., Quirk, A., Stone, C., Rao, A., Ungar, L., ... & Duckworth, A. L. (2023). Using artificial intelligence to assess personal qualities in college admissions. *Science Advances*, 9(41), eadg9405.
- Buyalskaya, A., Ho, H., Milkman, K. L., Li, X., Duckworth, A. L., & Camerer, C. (2023). What can machine learning teach us about habit formation? Evidence from exercise and hygiene. *Proceedings of the National Academy of Sciences*, 120(17), e2216115120.
- Lira, B., O'Brien, J. M., Peña, P. A., Galla, B. M., D'Mello, S., Yeager, D. S., Defnet, A., Kautz, T., Munkacsy, K., & Duckworth, A. L. (2022). Large studies reveal how reference bias limits policy applications of self-report measures. *Scientific Reports*, 12, 19189.
- Duckworth, A. L., Kautz, T., Defnet, A., Satlof-Bedrick, E., Talamas, S., Lira, B., & Steinberg, L. (2021). Students attending school remotely suffer socially, emotionally, and academically. *Educational Researcher*.
- Milkman, K. L., Gromet, D., Ho, H., Kay, J. S., Lee, T. W., Pandiloski, P., Park, Y., Rai, A., Bazerman, M., Beshears, J., Bonacorsi, L., Camerer, C., Chang, E., Chapman, G., Cialdini, R., Dai, H., Eskreis-Winkler, L., Fishbach, A., Gross, J. J., ... Duckworth, A. L. (2021). Megastudies improve the impact of applied behavioural science. *Nature*, 600, 478–483.
- Duckworth, A. L., & Gross, J. J. (2020). Behavior change. *Organizational Behavior and Human Decision Processes*, 161, 39–49.
- Duckworth, A. L. (2019). Using psychological science to help children thrive. *Perspectives on Psychological Science*, 14(1), 34–36.
- Duckworth, A. L., Milkman, K. L., & Laibson, D. (2019). Beyond willpower: Strategies for reducing failures of self-control. *Psychological Science in the Public Interest*, 19(3), 102–129.
- Duckworth, A. L., Quirk, A., Gallop, R., Hoyle, R. H., Kelly, D. R., & Matthews, M. D. (2019). Cognitive and noncognitive predictors of success. *Proceedings of the National Academy of Sciences*, 116(47), 23499–23504.
- Duckworth, A. L., Taxer, J., Eskreis-Winkler, L., Galla, B. M., & Gross, J. J. (2019). Self-control and academic achievement. *Annual Review of Psychology*, 70, 373–399.
- Eskreis-Winkler, L., Milkman, K. L., Gromet, D. M., & Duckworth, A. L. (2019). A large-scale field experiment shows giving advice improves academic outcomes for the advisor. *Proceedings of the National Academy of Sciences*, 116(30), 14808–14810.
- Duckworth, A. L., Gendler, T. S., & Gross, J. J. (2016). Situational strategies for self-control. *Perspectives on Psychological Science*, 11(1), 35–55.
- Duckworth, A. L., & Yeager, D. S. (2015). Measurement matters: Assessing personal qualities other than cognitive ability for educational purposes. *Educational Researcher*, 44(4), 237–251.
- Duckworth, A. L., Gendler, T. S., & Gross, J. J. (2014). Self-control in school-age children. *Educational Psychologist*, 49(3), 199–217.
- Eisenberg, N., Duckworth, A. L., Spinrad, T. L., & Valiente, C. (2014). Conscientiousness: Origins in childhood? *Developmental Psychology*, 50(5), 1331–1349.
- Duckworth, A. L., Kim, B., & Tsukayama, E. (2013). Life stress impairs self-control in early adolescence. *Frontiers in Psychology*, 3(608), 1–12.
- Duckworth, A. L., Quinn, P. D., Lynam, D. R., Loeber, R., & Stouthamer-Loeber, M. (2011). Role of test motivation in intelligence testing. *Proceedings of the National Academy of Sciences*, 108(19), 7716–7720.
- Borghans, L., Duckworth, A. L., Heckman, J. J., & ter Weel, B. (2008). The economics and psychology of personality traits. *Journal of Human Resources*, 43(4), 972–1059.
- Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, 92(6), 1087–1101.
- Duckworth, A. L., & Seligman, M. E. P. (2005). Self-discipline outdoes IQ predicting academic performance in adolescents. *Psychological Science*, 16(12), 939–944.

Record of: Benjamin Lira Luttges
Penn ID: 38161334
Date of Birth: 01-FEB
Date Issued: 04-MAR-2024

The University of Pennsylvania

Level: Graduate/Research

Primary Program

Program: Graduate School of Arts & Sciences Doctor
of Philosophy
Division : School of Arts & Sciences - Graduate
Division
Major : Psychology

Secondary Program(s)

Program : Master of Arts
Division : School of Arts & Sciences - Graduate
Division
Major : Psychology

Degree(s) Awarded Master of Arts 21-DEC-2023

Program : Master of Arts
Division : School of Arts & Sciences - Graduate
Division
Major : Psychology

SUBJ NO.	COURSE TITLE	CU GRD	R
Institution Information continued:			
PSYC 600	Proseminar in Psych:	0.50 A	
	Neuroendocrinology		
PSYC 699	Indiv Res for 1st Yr Grd	1.50 A+	
Ehrs: 3.00	GPA-Hrs: 3.00 QPts: 12.00	GPA: 4.00	
Fall 2022			
EDUC 7847	Social and Statistical	1.00 A+	
	Network Analysis		
PSYC 6000	Social Psychology	0.50 A+	I
PSYC 6000	Judgment & Decisions	0.50 A+	I
PSYC 9999	Individual Study and Research	1.00 A	I
Ehrs: 3.00	GPA-Hrs: 3.00 QPts: 12.00	GPA: 4.00	
Spring 2023			
PSYC 9999	Individual Study and Research	4.00 A+	I
Ehrs: 4.00	GPA-Hrs: 4.00 QPts: 16.00	GPA: 4.00	
Fall 2023			
PSYC 9999	Individual Study and Research	3.00 A+	I
Ehrs: 3.00	GPA-Hrs: 3.00 QPts: 12.00	GPA: 4.00	
Spring 2024			
PSYC 9999	Individual Study and Research	3.00 IN PROGRESS	
	In Progress Credits	3.00	
***** CONTINUED ON PAGE 2 *****			

SUBJ NO.	COURSE TITLE	CU GRD	R
INSTITUTION CREDIT:			
Fall 2021			
CIS 520	Machine Learning	1.00 A	
OIDD 937	Methods Stumblers	0.50 A	
PSYC 600	Proseminar in Psych: Social	0.50 A	
	Emotional Develop		
PSYC 600	Proseminar in Psych:	0.50 A	
	Cognitive Neuroscience		
PSYC 699	Indiv Res for 1st Yr Grd	1.50 A+	
Ehrs: 4.00	GPA-Hrs: 4.00 QPts: 16.00	GPA: 4.00	
Spring 2022			
OIDD 941	Dist System Sem: Topics in	0.50 A+	
	Bandits, RL & Transfer		
	Learning		
PSYC 600	Proseminar in Psych: Language	0.50 A	
***** CONTINUED ON NEXT COLUMN *****			

Record of: Benjamin Lira Luttges
Penn ID: 38161334
Date of Birth: 01-FEB
Date Issued: 04-MAR-2024

The University of Pennsylvania

U N O F F I C I A L Page: 2

Level: Graduate/Research

***** TRANSCRIPT TOTALS *****				
	Earned Hrs	GPA Hrs	Points	GPA
TOTAL INSTITUTION	17.00	17.00	68.00	4.00
TOTAL TRANSFER	0.00			
OVERALL	17.00	17.00	68.00	4.00
***** END OF TRANSCRIPT *****				

Unofficial Academic Transcripts

I completed my bachelor's degree and professional licensure in Psychology at the University of Lima in Peru. I completed an academic exchange program during this time at Katholieke Universiteit Leuven (KU-Leuven), in Belgium.

Both the Peruvian and the Belgian grading system lies in a scale from 0 – 20, with 11 being the minimum passing grade.

Converted to US standards, I graduated with a 4.0/4.0 cumulative GPA, ranking first in my cohort. In the native grading system this was 18.6/20.

I've attached originals in Spanish alongside certified translations after this readable summary.

Class Name	Credits	Course Grade
<i>2019—1</i>		
Foundations of Mathematics	4	
Introduction to University Research	1	NA
Spanish Language I	4	
Contemporary World History	3	17
Introduction to Research	3	18
Foundations of Political Science	2	18
Psychology	3	16
General Economics	3	19
Spanish Language II	3	18
Introduction to the Social Sciences	3	19
<i>2009—2</i>		
Contemporary History of Peru	3	17
Literature	4	18
Philosophy	4	17
Academic Writing	3	19
Major Peruvian Issues	3	19
Social Behavior	3	16
<i>2010—1</i>		
Value Theory	3	17
Psychology of Human Communication	3	16
Psychology of Learning	4	19
Community Psychology	2	18
Psychology of Motivation	4	19
Human Psychobiology I (The cellular level of psychic activity)	3	18
<i>2010—2</i>		
Development of Social Skills	3	19
Developmental Psychology I	3	19
Experimental Psychology	4	20
Philosophy of Science	3	17
Cognitive Psychology I	3	19
Human Psychobiology II (The metabolic and functional levels of psychic activity)	3	19
<i>2011—1</i>		
Statistics I	3	20
Developmental Psychology II	3	18
Psychological Systems I	3	19
Personality Psychology	4	19
Cognitive Psychology II	4	19
Human Psychobiology III (The unconscious level of psychic activity)	3	20

Class Name	Credits	Course Grade
<i>2011—2</i>		
Statistics II	3	18
Interview and Observation Techniques	4	18
Adjustment Psychology	4	19
Psychological Systems II	3	18
Culture and Personality	3	20
Human Psychobiology IV (The conscious level of psychic activity)	3	19
<i>2012—0</i>		
Foundations of Psychotherapy	3	20
<i>2012—1</i>		
Epistemology of Psychology	3	17
Projective Techniques I	3	19
Psychometrics I	4	20
Organizational Behavior I	3	17
Educational Psychology I	4	20
Qualitative Research	3	18
<i>2012—2</i>		
Projective Techniques II	3	17
Psychometrics II	4	19
Professional Ethics	3	20
Psychopathology	4	20
Organizational Behavior II	3	18
Educational Psychology II	3	19
<i>2013—1</i>		
Psychological Test Construction and Design	3	18
Diagnosis and Psychological Report	4	18
Psychological Research Methodology	3	20
Group Techniques	3	19
Personnel Training and Development	3	18
Instructional Psychology	3	19
<i>2013—2 (Master Level Coursework at KU-Leuven)</i>		
Cognitive Science	2	17
Education in Relation to Society and Culture	3	18
Educational Effectiveness	3	17
Educational Policy	3	18
Fundamentals of Artificial Intelligence	2	18
Philosophy of Education	3	18
<i>2014—1</i>		
Psychological Counseling	3	19
Project Design and Evaluation	3	18
Vocational and Occupational Orientation	4	19
Psychology of Exceptionality	4	19
Diagnosis of Organizational Culture and Climate	3	20
<i>2014—2</i>		
Thesis Research Seminar I	4	20
Internship I	4	19
Contemporary Topics in Psychology I	4	19
<i>2015—1</i>		
Thesis Research Seminar II	4	19
Internship II	4	19
Contemporary Topics in Psychology II	4	20

6. Appendices

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In the pages that follow I have attached original and certified translated academic transcripts from Non-US Institutions.

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KU LEUVEN

FACULTY OF PSYCHOLOGY AND
EDUCATIONAL SCIENCES
DEKENSTRAAT 2 - box 3701
3000 LEUVEN



Mr. Benjamin Lira Luttes
Surco
Lima
Las Cantutas 301 Ap 601
L33 LIMA
PERU

TRANSCRIPT

Programme : Programme for Exchange Students Faculty Psychology and Educational Sciences (Leuven)

Course Units

Credits Grade

Current academic year 2013-2014

1S-H02A0C	Fundamentals of Artificial Intelligence	5	C	18	13-14/jan
1S-H02B2A	Cognitive Science	4	C	17	13-14/jan
1S-P0P24B	Philosophy of Education	5	C	18	13-14/jan
1S-P0P25C	Education in Relation to Society and Culture	5	C	18	13-14/jan
1S-P0P33A	Educational Policy	5	C	18	13-14/jan
1S-P0P34A	Educational Effectiveness	5	C	17	13-14/jan

Overall result : Establish results

Date of issue of results : 13.02.2014

secretary,

chair,

Prof. dr. Walter Schaecken

Prof. dr. Jan Elen



International Students Office
Faculty of Psychology
and Educational Sciences
Katholieke Universiteit Leuven
Dekenstraat 2 box 3702
3000 LEUVEN (Belgium)

Exam results are graded on a scale of 20. However in some cases the student may receive a code G to indicate that he/she has passed a part of the course for which there is no numerical grading. A code C indicates that a student has passed that course. A code T indicates that whereas a student has not passed that course he/she has still passed the year or programme as a whole. A code V indicates that the student is exempted from that course. A code NA indicates that either the student did not sit the exam or did not complete the course. A code FR indicates that the student has been found to have cheated. A code NVT indicates that the course is no longer relevant for this student. A code GR indicates that there is no result yet for this course, but that a result is expected later on.

This report on your marks is provided purely as an extra service. In no way does it replace the study progress dossier that can be found on KU Loket, the only official source through which results and procedures of appeal are communicated.

1S = 1st Semester - 2S = 2nd Semester - AY = Academic Year

ECTS – European Credit Transfer System

KU LEUVEN Grading System

Duration of course unit:

AY = full academic year

1S = 1 semester during 1st semester

2S = 1 semester during 2nd semester

Description of the institutional grading system:

Individual grades are reported to the students on a scale ranging from 0 to 20.

ECTS credits for a given course are awarded (C) if a student gets a grade of 10 out of 20 (or higher). NA = Not Attended.

For students who pass the examinations, the grades have the following meaning:

- 10 or 11: sufficient;
- 12 or 13: satisfactory;
- 14 or 15: good;
- 16 or 17: very good;
- and 18 or more: excellent

ECTS grading scale:

ECTS grade	% of successful students normally achieving the grade	Definition
A	10	EXCELLENT - outstanding performance with only minor errors
B	25	VERY GOOD - above the average standard but with some errors
C	30	GOOD - generally sound work with a number of notable errors
D	25	SATISFACTORY - fair but with significant shortcomings
E	10	SUFFICIENT - performance meets the minimum criteria
FX	-	FAIL - some more required before the credit can be awarded
F	-	FAIL - considerable further work is required

<http://www.kuleuven.be/education/ects/positioning/faculties/ppw.html>



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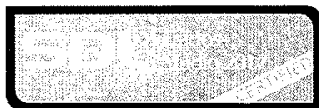
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Apartado 0784 - Lima 16 - Perú

The undersigned Certified Translator, Member of the Peruvian Association of Professional Licensed Translators (CTP) with No. 0243, is currently working in the ICPNA's Translation and Interpretation Center, and is authorized by the CTP to sign certified translations.

Lima, November 18, 2019



Graciela Miranda Ramón
Graciela Miranda Ramón
CTP N° 0243



ata
**American
Translators
Association**
CORPORATE MEMBER

COLEGIO DE TRADUCTORES DEL PERÚ

Creado por Ley N° 26684

GRACIELA M. MIRANDA RAMÓN

Certified Translator CTP No. 0243

Spanish – English – German

Calle Maurizio Cassati 115, Dpto. 101 San Borja

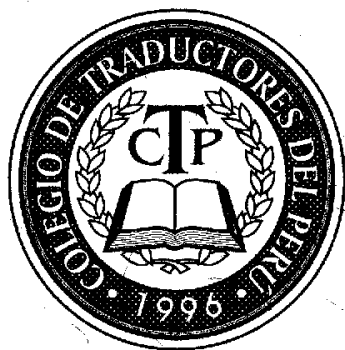
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CT No. 0653-2019

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UNIVERSIDAD DE LIMA



Graciela Miranda Ramón
CTP N° 0243

Nº 0372552

Valor 3.50 Soles



GRACIELA M. MIRANDA RAMÓN
 Certified Translator
 CTP No. 0243

CERTIFIED TRANSLATION No. 0653-2019

Page 1 of 1

[Logo]
 UNIVERSIDAD DE LIMA [UL]
 [UNIVERSITY OF LIMA]
Scientia et Praxis
 MCMLXII

[Photograph]

CERTIFICATE

The University Director of Student Services and Registry does hereby certify that

Benjamin LIRA LUTTGES,

with code **20092009**, completed the curriculum of the PSYCHOLOGY degree program in the 2015 April-July academic term. He belongs to the graduating January-July Class of 2015 and ranked first in the Honor List out of 40 alumni.

This certificate is issued at the request of the interested party for the purposes deemed convenient.

Lima, October 14, 2015

[Signed]

University Bureau of Student Services and
 Registry

[Seal]

University Bureau of Student Services and
 Registry
 UL

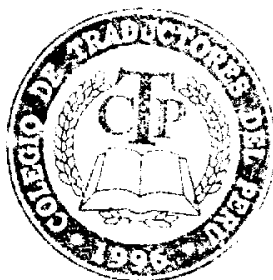
Graciela Miranda Ramon
 CTP No. 0243

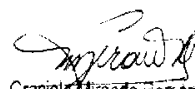
Maurizio Cassati 115, Apt. 101 San Borja
 Cellphone: 998 948628
 E-mail: gramiranda@hotmail.com

I, the undersigned Certified Translator, Member of the Peruvian Association of Professional Licensed Translators (CTP), do hereby certify that this Certified Translation, consisting of 01 pages, is a true and correct translation into English of the original document in Spanish, enclosed herewith, which has been produced before me.

This Certification shall be considered an acknowledgment of the accuracy of the translation but no of the authenticity or contents of the document in source language attached hereto.

Signed in Lima, this 18th day of November, 2019




Graciela Miranda Rarior
CTP N° 0243



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Av. Angamos Oeste 120 Miraflores
Aptdo 0784 - Lima 18 - Perú

The undersigned Certified Translator, Member of the Peruvian Association of Professional Licensed Translators (CTP) with No. 0243, is currently working in the ICPNA's Translation and Interpretation Center, and is authorized by the CTP to sign certified translations.

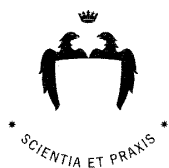
Lima, November 18, 2019



Engracia
Engracia Ramon
CTP 0243



ata
**American
Translators
Association**
CORPORATE MEMBER



CONSTANCIA



El Director Universitario de Servicios Académicos y Registro deja constancia de que

BENJAMIN LIRA LUTTGES

con código **20092009**, completó el plan de estudios de la carrera de PSICOLOGÍA en el período abril-julio del 2015. Pertenece a la promoción enero-julio del 2015 y obtuvo el puesto número 1 en el orden de mérito de un total de 40 egresados.

Se extiende la presente constancia a solicitud del interesado para los fines que considere conveniente.

Lima, 14 de octubre de 2015.


Dirección Universitaria
de Servicios Académicos y Registro



COLEGIO DE TRADUCTORES DEL PERÚ

Creado por Ley N° 26684

GRACIELA M. MIRANDA RAMÓN

Certified Translator CTP No. 0243

Spanish – English – German

Calle Maurizio Cassati 115, Dpto. 101 San Borja

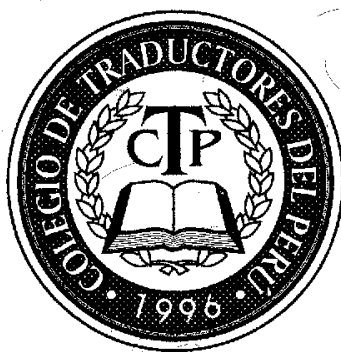
Cellphone: 998 948628

E-mail: gramiranda@hotmail.com

CERTIFIED TRANSLATION

CT No. 0651-2019

ACADEMIC TRANSCRIPT: GENERAL STUDIES
PROGRAM
BENJAMIN LIRA LUTTGES
UNIVERSIDAD DE LIMA



Graciela Miranda Ramón
CTP N° 0243

Nº 0372550

Valor 3.50 Soles



CERTIFIED TRANSLATION No. 0651-2019

Page 1 of 1

No. 0087474

[Logo]
UL
Scientia et Praxis

UNIVERSIDAD DE LIMA [UL]
[UNIVERSITY OF LIMA]
ACADEMIC TRANSCRIPT

[Photograph]

GENERAL STUDIES PROGRAM

The undersigned UL authorities do hereby certify that
Benjamin LIRA LUTTGES, code **20092009**
took the courses shown below with the following results:

Code	Course	Credits	Grade	Book	Folio	Term
6325	Foundations of Mathematics	04.0				
6324	Introduction to University Research	01.0		CVLD. R.D. 2009/345		2009-1
6320	Spanish Language I	04.0		CVLD. R.D. 2009/345		2009-1
6319	Contemporary Universal History	03.0		CVLD. R.D. 2009/345		2009-1
6321	Introduction to Research	03.0	Seventeen	113	102	2009-1
6322	Foundations of Political Science	02.0	Eighteen	113	350	2009-1
6323	Psychology	03.0	Eighteen	113	472	2009-1
6327	General Economics	03.0	Sixteen	113	588	2009-1
6328	Spanish Language II	03.0	Nineteen	113	844	2009-1
6329	Introduction to Social Science	03.0	Eighteen	113	926	2009-1
6330	History of Contemporary Peru	03.0	Nineteen	113	939	2009-1
6331	Literature	04.0	Seventeen	114	703	2009-2
6332	Philosophy	04.0	Eighteen	114	749	2009-2
		04.0	Seventeen	114	799	2009-2

AS STATED IN THE BOOKS TO WHICH WE REFER IF NECESSARY.

This transcript records courses with passing grades only. It does not attest to the completion of studies or the attainment of any academic degree or professional title.

Academic performance is graded on a 20-point scale, eleven [11] being the minimum passing grade.

Any amendment or addition voids this transcript.

Lima, June 13, 2018

[Signed]

Bárbara Milagros FARFÁN FIORANI
Secretary General

[Signed]

Alejandro Gustavo LARREA DAVILA
University Director of Student Services and Registry

[Seal]

UL
Lima - Perú
General Secretariat

[Seal]

University Bureau of Student Services and Registry
UL

[Watermark logo]
UL
Scientia et Praxis

Barbara Milagros Farfán Fiorani
(P. 0087474)

Manfredo Casarini 115, Apt. 101 San Borja

I, the undersigned Certified Translator, Member of the Peruvian Association of Professional Licensed Translators (CTP), do hereby certify that this Certified Translation, consisting of 01 page(s), is a true and correct translation into English of the original document in Spanish enclosed herewith, which has been produced before me.

This certification shall be considered an acknowledgment of the accuracy of the translation but not of the authenticity or contents of the document in source language attached hereto.

Signed in Lima, this 18th day of November, 2019




Graciela Miranda Ramos
CTP N° 0243



UNIVERSIDAD DE LIMA

CERTIFICADO DE ESTUDIOS

PROGRAMA DE ESTUDIOS GENERALES



Las autoridades de la Universidad de Lima que suscriben, certifican que :
BENJAMIN LIRA LUTTGES, código 20092009,
 ha cursado las asignaturas que se indican con los resultados siguientes :

Código	Nombre de Asignatura	Crédito	Calificativo	Tomo	Folio	Ciclo
6325	FUNDAMENTOS DE MATEMÁTICA	04.0	CVLD. R.D.2009/345			2009 - 1
6324	INTRODUCCIÓN AL TRABAJO UNIVERSITARIO	01.0	CVLD. R.D.2009/345			2009 - 1
6320	LENGUAJE I	04.0	CVLD. R.D.2009/345			2009 - 1
6319	HISTORIA UNIVERSAL CONTEMPORÁNEA	03.0	DIECISIETE	113	102	2009 - 1
6321	INTRODUCCIÓN A LA INVESTIGACIÓN	03.0	DIECIOCHO	113	350	2009 - 1
6322	FUNDAMENTOS DE CIENCIA POLÍTICA	02.0	DIECIOCHO	113	472	2009 - 1
6323	PSICOLOGÍA	03.0	DIECISEIS	113	588	2009 - 1
6327	ECONOMÍA GENERAL	03.0	DIECINUEVE	113	844	2009 - 1
6328	LENGUAJE II	03.0	DIECIOCHO	113	926	2009 - 1
6329	INTRODUCCIÓN A LAS CIENCIAS SOCIALES	03.0	DIECINUEVE	113	939	2009 - 1
6330	HISTORIA DEL PERÚ CONTEMPORÁNEO	03.0	DIECISIETE	114	703	2009 - 2
6331	LITERATURA	04.0	DIECIOCHO	114	749	2009 - 2
6332	FILOSOFÍA	04.0	DIECISIETE	114	799	2009 - 2

ASI CONSTA EN LOS LIBROS A LOS QUE NOS REMITIMOS EN CASO NECESARIO.

El presente certificado consigna únicamente las asignaturas aprobadas y no acredita la culminación de estudios o la obtención del grado académico o título profesional.

El rendimiento académico se califica con notas de cero (00) a veinte (20), siendo once (11) la nota mínima aprobatoria.

Cualquier enmendadura o anotación invalida el presente certificado.

Lima, 13 de junio de 2018

BÁRBARA MILAGROS FARFÁN FIORANI
 SECRETARÍA GENERAL



ALEJANDRO GUSTAVO LARREA DAVILA
 DIRECCIÓN UNIVERSITARIA DE SERVICIOS ACADÉMICOS Y REGISTRO





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Apartado 0784 - Lima 18, Perú

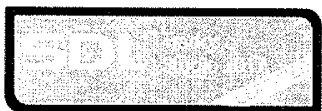


The undersigned Certified Translator, Member of the Peruvian Association of Professional Licensed Translators (CTP) with No. 0243, is currently working in the ICPNA's Translation and Interpretation Center, and is authorized by the CTP to sign certified translations.

Lima, November 18, 2019



Graciela Miranda Ramón
Graciela Miranda Ramón
CTP N° 0243



ata
**American
Translators
Association**
CORPORATE MEMBER

GRACIELA M. MIRANDA RAMÓN

Certified Translator CTP No. 0243

Spanish – English – German

Calle Maurizio Cassati 115; Dpto. 101 San Borja

Cellphone: 998 948628

E-mail: gramiranda@hotmail.com

CERTIFIED TRANSLATION

CT No. 0652-2019

ACADEMIC TRANSCRIPT: PSYCHOLOGY ACADEMIC
PROGRAM

BENJAMIN LIRA LUTTGES
UNIVERSIDAD DE LIMA




Graciela Miranda Ramón
CTP N° 0243

N° 0372551

Valor 3.50 Soles

VER INDICACIONES AL REVERSO

CERTIFIED TRANSLATION No. 0652-2019

Page 1 of 2

No. 0087475

UNIVERSIDAD DE LIMA [UL]

[UNIVERSITY OF LIMA]

ACADEMIC TRANSCRIPT

[Photograph]

[Logo]

UL

Scientia et Praxis

PSYCHOLOGY ACADEMIC PROGRAM

The undersigned UL authorities do hereby certify that
Benjamin LIRA LUTTGES, code 20092009
 took the courses shown below with the following results:

Code	Course	Credits	Grade	Book	Folio	Term
1471	Written Expression	03.0	Nineteen	5	47	2009-2
1478	National Problems	03.0	Nineteen	5	93	2009-2
6020	Social Behavior	03.0	Sixteen	5	153	2009-2
1479	Value Theory	03.0	Seventeen	7	115	2010-1
6021	Psychology of Human Communication	03.0	Sixteen	7	181	2010-1
6156	Psychology of Learning	04.0	Nineteen	7	214	2010-1
6194	Community Psychology	02.0	Eighteen	7	229	2010-1
6304	Psychology of Motivation	04.0	Nineteen	7	290	2010-1
6355	Human Biopsychology I (Cellular Level of Psychic Activity)	03.0	Eighteen	7	321	2010-1
6022	Development of Social Skills	03.0	Nineteen	8	153	2010-2
6023	Life Cycle Development I	03.0	Nineteen	8	155	2010-2
6175	Experimental Psychology	04.0	Twenty	8	196	2010-2
6248	Philosophy of Science	03.0	Seventeen	8	217	2010-2
6273	Cognitive Psychology I	03.0	Nineteen	8	234	2010-2
6356	Human Biopsychology II (Metabolic and Functional Level of Psychic Activity)	03.0	Nineteen	8	291	2010-2
1203	Statistics I	03.0	Twenty	10	1	2011-1
6029	Life Cycle Development II	03.0	Eighteen	10	186	2011-1
6139	Psychological Systems I	03.0	Nineteen	10	200	2011-1
6150	Psychology of Personality	04.0	Nineteen	10	206	2011-1
6274	Cognitive Psychology II	04.0	Nineteen	10	263	2011-1
6357	Human Biopsychology III (Unconscious Level of Psychic Activity)	03.0	Twenty	10	318	2011-1
1204	Statistics II	03.0	Eighteen	11	4	2011-2
6031	Interview and Observation Techniques	04.0	Eighteen	11	168	2011-2
6032	Psychology of Adjustment	04.0	Nineteen	11	174	2011-2
6140	Psychological Systems II	03.0	Eighteen	11	181	2011-2
6249	Culture and Personality	03.0	Twenty	11	223	2011-2
6358	Human Biopsychology III (Conscious Level of Psychic Activity)	03.0	Nineteen	11	297	2011-2
6033	Foundations of Psychotherapy	03.0	Twenty	12	34	2012-0
6138	Epistemology of Psychology	03.0	Seventeen	13	189	2012-1
6151	Projective Techniques I	03.0	Nineteen	13	200	2012-1
6167	Psychometry I	04.0	Twenty	13	214	2012-1

AS STATED IN THE BOOKS TO WHICH WE REFER IF NECESSARY.

This transcript records courses with passing grades only. It does not attest to the completion of studies or the attainment of any academic degree or professional title.

Academic performance is graded on a 20-point scale, eleven [11] being the minimum passing grade.

Any amendment or addition voids this transcript.

Lima, June 13, 2018

[Signed]

Bárbara Milagros FAREÁN FIORANI

Secretary General

[Seal]

UL

Lima - Perú

General Secretariat

[Signed]

Alejandro Gustavo LARREA DAVILA

University Director of Student Services and Registry

[Seal]

University Bureau of Student Services and Registry

UL

Page 2 of 2

[Photograph]

took the courses shown below with the following results:

General Secretariat

I, the undersigned Certified Translator, Member of the Peruvian Association of Professional Licensed Translators (CTP), do hereby certify that this Certified Translation, consisting of 2 pages, is a true and correct translation into English of the original document in Spanish enclosed herewith, which has been produced before me.

This certification shall be considered an acknowledgment of the accuracy of the translation but not of the authenticity or contents of the document in source language attached hereto.

Signed in Lima, this 18th day of November, 2019.



Graciela Miranda Rando
Graciela Miranda Rando
CTP N° 0243



UNIVERSIDAD DE LIMA

CERTIFICADO DE ESTUDIOS

CARRERA DE PSICOLOGÍA



Las autoridades de la Universidad de Lima que suscriben, certifican que :
BENJAMIN LIRA LUTTGES, código 20092009,
 ha cursado las asignaturas que se indican con los resultados siguientes :

Código	Nombre de Asignatura	Crédito	Calificativo	Tomo	Folio	Ciclo
1471	EXPRESIÓN ESCRITA	03.0	DIECINUEVE	5	47	2009 - 2
1478	PROBLEMÁTICA NACIONAL	03.0	DIECINUEVE	5	93	2009 - 2
6020	CONDUCTA SOCIAL	03.0	DIECISEIS	5	153	2009 - 2
1479	TEORÍA DE LOS VALORES	03.0	DIECISIETE	7	115	2010 - 1
6021	PSICOLOGÍA DE LA COMUNICACIÓN HUMANA	03.0	DIECISEIS	7	181	2010 - 1
6156	PSICOLOGÍA DEL APRENDIZAJE	04.0	DIECINUEVE	7	214	2010 - 1
6194	PSICOLOGÍA COMUNITARIA	02.0	DIECIOCHO	7	229	2010 - 1
6304	PSICOLOGÍA DE LA MOTIVACIÓN	04.0	DIECINUEVE	7	290	2010 - 1
6355	PSICOBIOLOGÍA HUMANA I (EL NIVEL CELULAR DE LA ACTIVIDAD PSÍQUICA)	03.0	DIECIOCHO	7	321	2010 - 1
6022	DESARROLLO DE HABILIDADES SOCIALES	03.0	DIECINUEVE	8	153	2010 - 2
6023	DESARROLLO DEL CICLO VITAL I	03.0	DIECINUEVE	8	155	2010 - 2
6175	PSICOLOGÍA EXPERIMENTAL	04.0	VEINTE	8	196	2010 - 2
6248	FILOSOFÍA DE LA CIENCIA	03.0	DIECISIETE	8	217	2010 - 2
6273	PSICOLOGÍA COGNITIVA I	03.0	DIECINUEVE	8	234	2010 - 2
6356	PSICOBIOLOGÍA HUMANA II (EL NIVEL METABÓLICO Y FUNCIONAL DE LA ACTIVIDAD PSÍQUICA)	03.0	DIECINUEVE	8	291	2010 - 2
1203	ESTADÍSTICA I	03.0	VEINTE	10	1	2011 - 1
6029	DESARROLLO DEL CICLO VITAL II	03.0	DIECIOCHO	10	186	2011 - 1
6139	SISTEMAS PSICOLÓGICOS I	03.0	DIECINUEVE	10	200	2011 - 1
6150	PSICOLOGÍA DE LA PERSONALIDAD	04.0	DIECINUEVE	10	206	2011 - 1
6274	PSICOLOGÍA COGNITIVA II	04.0	DIECINUEVE	10	263	2011 - 1
6357	PSICOBIOLOGÍA HUMANA III (EL NIVEL INCONSCIENTE DE LA ACTIVIDAD PSÍQUICA)	03.0	VEINTE	10	318	2011 - 1
1204	ESTADÍSTICA II	03.0	DIECIOCHO	11	4	2011 - 2
6031	TÉCNICAS DE ENTREVISTA Y OBSERVACIÓN	04.0	DIECIOCHO	11	168	2011 - 2
6032	PSICOLOGÍA DEL AJUSTE	04.0	DIECINUEVE	11	174	2011 - 2
6140	SISTEMAS PSICOLÓGICOS II	03.0	DIECIOCHO	11	181	2011 - 2
6249	CULTURA Y PERSONALIDAD	03.0	VEINTE	11	223	2011 - 2
6358	PSICOBIOLOGÍA HUMANA IV (EL NIVEL CONSCIENTE DE LA ACTIVIDAD PSÍQUICA)	03.0	DIECINUEVE	11	297	2011 - 2
6033	FUNDAMENTOS DE PSICOTERAPIA	03.0	VEINTE	12	34	2012 - 0
6138	EPISTEMOLOGÍA DE LA PSICOLOGÍA	03.0	DIECISIETE	13	189	2012 - 1
6151	TÉCNICAS PROYECTIVAS I	03.0	DIECINUEVE	13	200	2012 - 1
6167	PSICOMETRÍA I	04.0	VEINTE	13	214	2012 - 1

ASI CONSTA EN LOS LIBROS A LOS QUE NOS REMITIMOS EN CASO NECESARIO.

El presente certificado consigna únicamente las asignaturas aprobadas y no acredita la culminación de estudios o la obtención del grado académico o título profesional.

El rendimiento académico se califica con notas de cero (00) a veinte (20), siendo once (11) la nota mínima aprobatoria.

Cualquier enmendadura o anotación invalida el presente certificado.

Lima, 13 de junio de 2018

BÁRBARA MILAGROS FARFÁN FIORANI
SECRETARÍA GENERAL



ALEJANDRO GUSTAVO LARREA DAVILA
DIRECCIÓN UNIVERSITARIA DE SERVICIOS ACADÉMICOS Y REGISTRO





UNIVERSIDAD DE LIMA

CERTIFICADO DE ESTUDIOS

CARRERA DE PSICOLOGÍA



Las autoridades de la Universidad de Lima que suscriben, certifican que :
BENJAMIN LIRA LUTTGES, código 20092009,
 ha cursado las asignaturas que se indican con los resultados siguientes :

Código	Nombre de Asignatura	Crédito	Calificativo	Tomo	Folio	Ciclo
6292	COMPORTAMIENTO ORGANIZACIONAL I	03.0	DIECISIETE	13	265	2012 - 1
6309	PSICOLOGÍA EDUCATIVA I	04.0	VEINTE	13	283	2012 - 1
6349	INVESTIGACIÓN CUALITATIVA	03.0	DIECIOCHO	13	296	2012 - 1
6152	TÉCNICAS PROYECTIVAS II	03.0	DIECISIETE	14	189	2012 - 2
6168	PSICOMETRÍA II	04.0	DIECINUEVE	14	202	2012 - 2
6208	ÉTICA PROFESIONAL	03.0	VEINTE	14	210	2012 - 2
6285	PSICOPATOLOGÍA	04.0	VEINTE	14	244	2012 - 2
6293	COMPORTAMIENTO ORGANIZACIONAL II	03.0	DIECIOCHO	14	250	2012 - 2
6341	PSICOLOGÍA EDUCATIVA II	03.0	DIECINUEVE	14	270	2012 - 2
6169	DISEÑO Y CONSTRUCCIÓN DE INSTRUMENTOS PSICOLÓGICOS	03.0	DIECIOCHO	16	226	2013 - 1
6343	DIAGNÓSTICO E INFORME PSICOLÓGICO	04.0	DIECIOCHO	16	302	2013 - 1
6344	METODOLOGÍA DE LA INVESTIGACIÓN PSICOLÓGICA	03.0	VEINTE	16	306	2013 - 1
6345	TÉCNICAS DE GRUPOS	03.0	DIECINUEVE	16	308	2013 - 1
6350	CAPACITACIÓN Y DESARROLLO DE PERSONAL	03.0	DIECIOCHO	16	314	2013 - 1
6351	PSICOLOGÍA INSTRUCCIONAL	03.0	DIECINUEVE	16	316	2013 - 1
901124	COGNITIVE SCIENCE	02.0	RCNC. R.D.2014/653			2013 - 2
901414	EDUCATION IN RELATION TO SOCIETY AND CULTURE	03.0	RCNC. R.D.2014/653			2013 - 2
901415	EDUCATIONAL EFFECTIVENESS	03.0	RCNC. R.D.2014/653			2013 - 2
901412	EDUCATIONAL POLICY	03.0	RCNC. R.D.2014/653			2013 - 2
901416	FUNDAMENTALS OF ARTIFICIAL INTELLIGENCE	02.0	RCNC. R.D.2014/653			2013 - 2
901413	PHILOSOPHY OF EDUCATION	03.0	RCNC. R.D.2014/653			2013 - 2
6294	CONSEJERÍA PSICOLÓGICA	03.0	DIECINUEVE	19	124	2014 - 1
6297	DISEÑO Y EVALUACIÓN DE PROYECTOS	03.0	DIECIOCHO	19	129	2014 - 1
6423	ORIENTACIÓN VOCACIONAL Y OCUPACIONAL	04.0	DIECINUEVE	19	234	2014 - 1
6424	PSICOLOGÍA DE LA EXCEPCIONALIDAD	04.0	DIECINUEVE	19	236	2014 - 1
6426	DIAGNÓSTICO DE CULTURA Y CLIMA ORGANIZACIONAL	03.0	VEINTE	19	238	2014 - 1
6428	SEMINARIO DE INVESTIGACIÓN I	04.0	VEINTE	20	234	2014 - 2
6429	INTERNADO I	04.0	DIECINUEVE	20	239	2014 - 2
6430	TEMAS ACTUALES EN PSICOLOGÍA I	04.0	DIECINUEVE	20	242	2014 - 2
6431	SEMINARIO DE INVESTIGACIÓN II	04.0	DIECINUEVE	22	258	2015 - 1
6432	INTERNADO II	04.0	DIECINUEVE	22	260	2015 - 1
6433	TEMAS ACTUALES EN PSICOLOGÍA II	04.0	VEINTE	22	264	2015 - 1

ASI CONSTA EN LOS LIBROS A LOS QUE NOS REMITIMOS EN CASO NECESARIO.

El presente certificado consigna únicamente las asignaturas aprobadas y no acredita la culminación de estudios o la obtención del grado académico o título profesional.

El rendimiento académico se califica con notas de cero (00) a veinte (20), siendo once (11) la nota mínima aprobatoria.

Cualquier enmendadura o anotación invalida el presente certificado.

Lima, 13 de junio de 2018



BÁRBARA MILAGROS FARFÁN FIORANI
 SECRETARÍA GENERAL



ALEJANDRO GUSTAVO LARREA BAVILA
 DIRECCIÓN UNIVERSITARIA DE SERVICIOS ACADÉMICOS Y REGISTRO

[Logo]
 UNIVERSIDAD DE LIMA
 [UNIVERSITY OF LIMA]
 SCIENTIA ET PRAXIS
 MCMLXII

[PHOTOGRAPH]

CERTIFICATE

The University Director of Academic Services and Registration does here certify that

BENJAMIN LIRA LUTTGES

(Student ID 20092009) completed his studies in the Psychology Major in the period March-July 2015 and earned a cumulative weighted average (P.P.A.) of 18.633.

The equivalence in the above-mentioned major between the P.P.A. 20-point grading scale (0-20) and the G.P.A. (0-4) is given in the following table:

20-point grading scale	G.P.A.
11.0 to 13.89	2.0 to 2.49
13.9 to 4.99	2.5 to 3.49
15.0 to 15.99	3.5 to 3.99
16.0 and above	4.0

This certificate is issued at the request of the interested party to serve and avail as occasion shall or may require.

Lima, November 29, 2019

(Illegible Signature)
 ALEJANDRO GUSTAVO LARREA DAVILA
 Director Academic Services and Registration

(Signed) B. Farfán
 BÁRBARA MILAGROS FARFÁN FIORANI
 General Secretariat

[Barcode]
 67783

CONSTANCIA



El Director Universitario de Servicios Académicos y Registro deja constancia de que

BENJAMIN LIRA LUTTGES

con código **20092009** completó el plan de estudios de la carrera de Psicología en el período académico 2015-1 y obtuvo 18.633 de promedio ponderado acumulado.

La equivalencia entre las escalas vigesimal (0-20) y G.P.A (0-4) para dicha carrera es la siguiente:

Escala vigesimal	G.P.A
11.0 a 13.89	2.0 a 2.49
13.9 a 14.99	2.5 a 3.49
15.0 a 15.99	3.5 a 3.99
16.0 en adelante	4.0

Se extiende la presente constancia a solicitud del interesado para los fines que considere convenientes.

Lima, 29 de noviembre de 2019

ALEJANDRO GUSTAVO LARREA DAVILA
DIRECTOR UNIVERSITARIO DE SERVICIOS ACADÉMICOS Y REGISTRO

BÁRBARA MILAGROS FARFÁN FIORANI
SECRETARIA GENERAL



67783