

Appendices

Appendix A

Surprise Quiz Question – Marketing

Context: Think about the product category “lottery scratch cards,” which is a game consisting of a card with hidden areas that the player must scratch to discover if it contains a prize. Players can buy a “scratch card,” either online or at a local lottery retailer; there are various prices, consider one that costs CLP\$500.

Question: “Analyze the ‘value’ of playing a lottery scratch card in terms of its benefits (functional and psychological) and costs (monetary and non-monetary) for the player.”

Appendix B

Surprise Quiz 1 Rubric

Total Score: 10 Points

Analyze the “value” of playing a lottery scratch-off in terms of its benefits (functional and psychological) and costs (monetary and non-monetary). Justify your answer.

The value of playing a lottery scratch-off is high when the perceived benefits (functional and psychological) outweigh the costs (monetary and non-monetary). Given the low financial cost of participation and the high emotional and functional benefits of entertainment, many players may perceive a positive value in their playing experience. Additionally, the possibility of winning a prize, although statistically small, can significantly increase the perceived value. (2 points)

They may mention:

Functional Benefits (Accessibility: Lottery scratch-offs are easy to acquire, Instantaneity: Gratification is immediate, Variety: Diversity of available games and different modes of participation, Chance to win) (2 Points)

Psychological Benefits: (Entertainment: The process of scratching and discovering whether one has won produces immediate excitement, Sense of Competence and Achievement: For some players, the challenge of "winning" the game or competing in a television program can increase the perceived value of the scratch-off, Social Inclusion: Participating in games that are also social or media events (such as “La Hora de Jugar”) can provide a sense of connection and belonging.) (2 Points)

Monetary Costs: Purchase Price: The initial cost of buying a scratch-off is relatively low. (2 Points)

Non-Monetary Costs: Time: Even if the time invested may be minimal, it is still a cost to consider, Risk of Addiction: Gambling can be addictive, and this is a significant non-monetary cost. Emotional Impact: The disappointment of not winning.) (2 Points)

Appendix C

Prompt 1: I want you to evaluate this student's answer. The maximum score is 10.

Prompt 2: What criteria did you use?

Appendix D

Correction without predefined criteria	Evaluation Criteria	Chat 1	Chat 2	Chat 3	Chat 4	Chat 5	Chat 6	Chat 7	Chat 8	Chat 9	Chat 10	Total Appearances
	Structure and Clarity											8
	Depth of Analysis											8
	Originality and Depth											5
	Solid Conclusion											4
	Relevance and Connection to the Question											4
	Cost Analysis											3
	Understanding of the Question											3
	Clarity and Coherence											2
	Concept Connection											2
	Identification of Benefits											2
	Value Proposition											2
	Use of Examples or Specific Details											2
	Benefit Analysis											1
	Balance Between Benefits and Costs											1
	Balance Between In-person and Online Modalities											1
	Quality of the Analysis											1
	Understanding of Value in Terms of Benefits (Functional and Psychological)											1
	Cost Identification											1
	Customer-Centered Perspective											1
	Pertinence to the Question											1
	General Presentation											1
Number of Evaluation Criteria		5	6	5	6	5	6	5	6	5	5	
Grade		8	7	7.5	8	8.5	7.5	8	8	8	8	

- i. A yellow highlight indicates each evaluation criterion from the instructor's rubric when it appears in a given Chat Session.

Appendix E

Appendix E.1

Evaluation without predefined criteria (Condensed)	Evaluation Criteria	Chat 1	Chat 2	Chat 3	Chat 4	Chat 5	Chat 6	Chat 7	Chat 8	Chat 9	Chat 10	Total Appearances
	Structure, Clarity, and Coherence											10
	Depth and Analysis											10
	Originality											5
	Solid Conclusion											4
	Understanding of the Question											8
	Value Proposition											6
Number of Evaluation Criteria		5	4	4	5	5	4	4	5	2	5	
Grade		8	7	7.5	8	8.5	7.5	8	8	8	8	

- i. A yellow highlight indicates each evaluation criterion from the instructor's rubric when it appears in a given Chat Session.

Appendix E.2

The definitions of these evaluation criteria, as interpreted by the AI in the context of the marketing question, were as follows:

- a) Structure, Clarity, and Coherence: This evaluation criterion assesses the organizational quality, clarity of expression, and logical consistency of the response.
 - I. Structure: Examines the hierarchical and logical organization of the response, ensuring that key points are presented in an orderly manner with a well-defined introduction, development, and conclusion.
 - II. Clarity: Measures precision in expression, ensuring that ideas are understandable and free of ambiguity.
 - III. Coherence: Ensures that all parts of the response are logically connected and that reasoning flows naturally without contradictions.
- b) Depth and Analysis: This evaluation criterion assesses the level of detail and depth in topic exploration, as well as the quality of reasoning applied.
 - I. Depth: Evaluates whether the student explores topics beyond the surface, considering multiple perspectives and providing substantial detail.
 - II. Analysis: Measures the ability to interpret, evaluate, and connect concepts, supporting arguments with critical reasoning and concrete example.
- c) Originality: This evaluation criterion measures the student's ability to provide innovative insights or unique approaches, avoiding repetitive arguments and demonstrating independent critical thinking.
- d) Solid Conclusion: This evaluation criterion assesses whether the response effectively concludes with a logical and persuasive summary of key points, reinforcing the analysis and providing additional value through final reflections or recommendations.
- e) Understanding of the Question: This evaluation criterion measures whether the student correctly understood the requirements of the question, ensuring that the response is relevant, complete, and aligned with the given context.
- f) Value Proposition: This evaluation criterion evaluates the student's ability to articulate a clear and persuasive statement explaining why a product or service is valuable. It assesses the coherent integration of benefits and costs, ensuring a well-balanced analysis focused on customer needs and expectations. A strong value proposition demonstrates logical reasoning that connects theoretical and practical elements of the case.

Appendix F

Appendix F.1

Correction with predefined criteria	Evaluation Criteria	Chat 1	Chat 2	Chat 3	Chat 4	Chat 5	Chat 6	Chat 7	Chat 8	Chat 9	Chat 10	Total Appearances
	Perceived Value											10
	Functional Benefits											10
	Psychological Benefits											10
	Monetary Costs											10
	Non-Monetary Costs											10
	Justification											10
	Depth and Analysis											2
	Clarity											1
	Number of Evaluation Criteria	6	6	6	7	6	6	6	8	6	6	
	Grade	5	5	5	4	5	5	5	4	5	5	

- i. A yellow highlight indicates each evaluation criterion from the instructor's rubric when it appears in a given Chat Session.
- ii. Purple is used to highlight any evaluation criteria not defined by the instructor.

Appendix F.2

According to ChatGPT-4o, the definition of the new evaluation criterion in the context of the marketing question was as follows:

- a) Justification: This evaluation criterion assesses whether the ideas and concepts presented are supported by solid arguments, clear evidence, or relevant reasoning, in accordance with the specific requirements of the evaluation criterion or evaluation rubric. It measures:
 - I. Whether the student substantiates or validates the concepts mentioned, rather than merely stating them.
 - II. Whether each significant point is backed by clear reasoning.
 - III. Whether all key ideas are fully developed to meet the requirements of the evaluation rubric or question.

Appendix G

Appendix G.1

Evaluation Criterion: "Functional Benefits"

Formal Definition: These are tangible or practical elements that provide value to the player. In the case of lottery scratch-offs, these benefits may include:

- **Accessibility:** Ease of purchase or participation (points of sale, online availability, low cost, etc.).
- **Instantaneity:** Immediate result upon playing, with no need to wait for long draws. Gratification is immediate.
- **Variety of games:** Different game options available that suit various tastes or budgets.
- **Chance to win:** Even if the odds are low, there is a possibility of winning a prize.

Possible Score: 0, 1, or 2 points.

Appendix G.2

Examples of Possible Scoring for Evaluation Criterion “Functional Benefits”

0 points

- **Example:** "Scratch-offs are fun."
 - *Clarification:* Incorrect because it does not explicitly state or mention a functional benefit similar to those in the definition.
 - **Example:** "It's a product sold in stores."
 - **Example:** "It's easy to play."
 - *Clarification:* Too general; it does not clearly identify a specific functional benefit from the definition.
 - **Example:** "You're more likely to lose, so its functional benefit is null."
 - *Clarification:* No functional benefit from the definition is explicitly mentioned by saying it's null.
 - **Example:** "Scratch-offs are accessible because their low cost allows many people to participate, which generates a lot of profit for the company."
 - *Clarification:* Although it mentions low cost, the justification is focused on the company's benefit, not the player's experience. This does not qualify as a functional benefit.
 - **Example:** "Scratch-offs are a system that works and provides economic benefits."
 - *Clarification:* This response is too general and does not explicitly mention a recognized functional benefit (accessibility, instantaneity, variety, chance to win). The phrase “economic benefits” is ambiguous and not directly related to the chance of winning.
-

1 point

- **Example:** "The instant result of scratch-offs is nice."
 - *Clarification:* The concept of instantaneity is mentioned, but it does not explain why this feature is relevant in the player's context.
 - **Example:** "Scratch-offs are accessible because they're easy to buy in stores."
 - *Clarification:* Accessibility is explicitly mentioned, but there is no development of why this is relevant to the player's experience.
 - **Example:** "Scratch-offs allow for economic benefits in case of winning a prize."
 - *Clarification:* The chance to win is mentioned, which is a functional benefit. However, it does not explain how this affects the player's experience.
-

2 points

- **Example:** "Scratch-offs are accessible because they can be easily bought at various physical locations and online, making them easy to acquire and allowing more people to participate without hassle."
 - *Clarification:* The benefit of accessibility is mentioned and correctly justified in terms of how it affects the player's experience, thus earning 2 points.
- **Example:** "Since the product is cheap, many people are willing to pay for something that can generate a large payout even though the odds are very low."
 - *Clarification:* Accessibility is mentioned and explained in terms of why it facilitates purchases without a significant financial barrier.
- **Example:** "Even though the odds are almost zero, there is still a chance of winning a prize equal to or greater than the scratch-off's price, which makes it appealing."
 - *Clarification:* The concept of chance to win is explicitly stated. It also explains the "why" by showing that it is attractive since the prize can outweigh the cost of the scratch-off.
- **Example:** "The accessibility of scratch-offs stands out because they're available at numerous points of sale, making it easy for anyone to purchase without hassle."
 - *Clarification:* Accessibility is clearly stated. It also explains *why* it's accessible by mentioning widespread availability, making them easy to acquire—thus justifying it in the player's context.
- **Example:** "Scratch-offs are characterized by their instantaneity: they allow players to enjoy a quick and direct experience without needing to invest much time."
 - *Clarification:* Instantaneity is mentioned, and its relevance is justified by highlighting that players don't have to wait to find out if they've won.
- **Example:** "Scratch-offs offer the chance to win money, which makes them attractive to players because they feel they can recover their investment and earn money quickly."
 - *Clarification:* The chance to win is mentioned, and it explains why this makes scratch-offs attractive to the player—since it implies a potential reward greater than the initial investment.
- **Example:** "Scratch-offs offer the possibility of winning a large prize worth much more than the purchase price, making them an attractive option for players seeking a small investment with the potential for high return."
 - *Clarification:* The chance to win is mentioned, which is a functional benefit per the definition. Its relevance is also justified in the player's context by emphasizing the cost-benefit relationship, helping explain why this benefit makes scratch-offs appealing. The mention of a "small investment with the potential for high return" explains how the player's perception of cost influences their decision to purchase.

Appendix G.3

Example 1

1. Perceived Value (2 points)

Score: 0/2

Observation: The student mentions that the scratching experience and instantaneity provide value to the customer, but does not explicitly state whether the perceived value is “high” or “low.” Additionally, they do not clearly compare the benefits (functional and psychological) and the costs (monetary and non-monetary), as required by the rubric.

Justification: According to the rubric, the analysis of perceived value must address how the benefits outweigh (or not) the costs, and must explicitly indicate whether the perceived value is high or low.

2. Functional Benefits (2 points)

Score: 2/2

Observation: The chance of winning a prize is mentioned, which aligns with the "chance to win" aspect in the rubric. A downside is that it's framed more as a value proposition rather than a functional benefit. The student also refers to instantaneity as a functional benefit, since it is an online scratch-off, which aligns with the rubric.

Justification: According to the rubric, functional benefits should include aspects such as accessibility, variety of games, and chance to win. Although the “chance to win” is only briefly justified, the concept of instantaneity is properly developed and justified, so 2/2 points are awarded. It is not necessary to mention all the rubric elements to receive full points, as long as the benefits are justified in terms of how they contribute to the functional value of the product in this case.

3. Psychological Benefits (2 points)

Score: 1/2

Observation: The student superficially mentions “satisfaction” as part of the customer’s experience, which aligns with entertainment in the rubric, although they do not make it explicit or develop the idea beyond simply stating it as a benefit. As a result, it remains vague.

Justification: According to the rubric, psychological benefits should include immediate excitement, entertainment, and/or a sense of social connection (if applicable). The analysis does not address these points or justify how “satisfaction” contributes to psychological value.

4. Monetary Costs (2 points)

Score: 0/2

Observation: The student refers to external costs unrelated to the product and never mentions the fixed price of CLP\$500, which is the purchase price.

Justification: The response is ambiguous and does not mention the purchase price as suggested by the rubric.

5. Non-Monetary Costs (2 points)

Score: 1/2

Observation: The student mentions non-monetary costs such as personal time, though

without specifying whether they refer to the time spent going to buy the scratch-off or the time spent scratching it, which would be minimal in the latter case. They also mention transportation costs, although framed as monetary rather than non-monetary, which is incorrect for this category.

Justification: A relevant point such as time is mentioned, although it lacks clarity, leaving ambiguity regarding its relation to the concept of time in the rubric. Other suggested points from the rubric are not mentioned, so partial credit is awarded for the time element, despite the lack of justification.

Final Score: 4/10

Final Comments: Your response covers some important aspects, such as functional benefits. However, to improve your score, it would be important to better define the perceived value and provide deeper justification for psychological benefits and non-monetary costs. Although you mention some of these benefits, more analysis and justification were needed. For example, you could have better explained how satisfaction and the chance to win a prize affect the value of the game from the player's perspective—making them want to buy it due to the possibility of earning money (Sense of Competence and Achievement according to the rubric), which is greater than the cost involved (definition of high perceived value).

Example 2

1. Value Concept (2 points)

Score: 0/2

Observation: It is mentioned that value is something exchanged in a market, which does not correspond to the definition present in the rubric. The value is also not explicitly defined as “high” or “low” in relation to the player's perception, which is a key point expected according to the rubric.

Justification: According to the rubric, the analysis of perceived value must address how the benefits (functional and psychological) outweigh the costs (monetary and non-monetary), so the student's definition is incorrect. Although some costs and benefits are mentioned, there is no clear connection established nor justification of why the perceived value could be positive or negative from the player's perspective or aligned with what is expected by the rubric.

2. Functional Benefits (2 points)

Score: 0/2

Observation: You mention entertainment as a functional benefit, which would be more aligned with psychological benefits than with functional ones, as stated in the rubric. You associate the chance to win with this emotion, making it a psychological benefit rather than a functional one. No other type of functional benefit aligned with the rubric is mentioned.

Justification: Only one functional benefit is mentioned, but the student confuses it as a psychological one, which is incorrect for this section (functional benefit). No other relevant concept is mentioned as stated in the rubric, so there is no score assigned to this criterion.

3. **Psychological Benefits (2 points)**

Score: 0/2

Observation: You talk about the emotion and expectations generated, which could be related to a relevant psychological benefit such as entertainment or personal achievement. However, it is not presented as a psychological benefit nor is it related to psychological benefits such as entertainment or personal achievement as required by the rubric.

Justification: Emotion is mentioned, but as a functional element. The concept of expectations is not sufficiently developed nor connected with what is expected by the rubric, so 0 points are assigned for this criterion.

4. **Monetary Costs (2 points)**

Score: 2/2

Observation: You explicitly mention the monetary value of the ticket as a monetary cost. You also mention others such as the ticket's production cost and logistics.

Justification: The value of the ticket is correctly mentioned as a monetary cost, as expected in the rubric. On the other hand, other mentioned costs do not correspond to consumer costs and raise doubts about the student's understanding of monetary costs. Full score is assigned despite the inconsistency, since the rubric allows mentioning the ticket's monetary cost as sufficient.

5. **Non-Monetary Costs (2 points)**

Score: 2/2

Observation: You mention the time invested in the scratching process and in the purchasing process. Nothing else is mentioned that could relate to the rubric, such as the risk of addiction or the emotional impact of losing.

Justification: The scratch-off process involves very little time. On the other hand, the purchasing process is more significant. According to the rubric, even if the time spent on purchase or gameplay is minimal, it is still a cost to consider, so this would be correct. Other non-monetary costs are not mentioned, but presenting one correctly and with justification is enough to obtain the full score.

Final Score: 4/10

Final Comments: Your response touches on some key points, such as monetary and non-monetary costs. However, to improve, it would be important to more clearly define the concept of perceived value as the difference between benefits and costs, and justify whether it is “high” or “low.”

Also, expand on the psychological benefits, such as the excitement and the chance of winning a prize, explaining how these influence the player's experience. For example, you could have developed how the expectation of winning generates entertainment and a sense of achievement, which increases the game's value from the consumer's perspective.

With more analysis and connection between concepts, you will be able to strengthen your response. Keep practicing—you're on the right track!

Appendix G.4

Instructions:

Evaluate the student's response to the question attached in the file Question.docx, strictly following the five evaluation criteria defined in the evaluation rubric: Concept of Value, Functional Benefits, Psychological Benefits, Monetary Costs, and Non-Monetary Costs.

Ignore non-evaluated aspects: Do not consider grammar, depth of analysis, clarity, style, or writing quality. Do not interpret or expand the evaluation criteria beyond what is explicitly stated in the document Points_Distribution.docx.

Evaluation Format: Use the standardized format that includes score, observation, and justification for each criterion, followed by a final score and final comments.

The correction scheme is in the document "Example_Output_Format.docx", and the score assignment is in the document "Points_Distribution.docx", which you must follow rigorously to be consistent in the distribution of points

Key Restriction:

Do not use any criteria such as depth, clarity, or relevance at any point in the evaluation.

Justifications must be strictly based on the examples from "Points_Distribution.docx" and "Example_Output_Format.docx", with primary focus on "Points_Distribution.docx".

Handling Incomplete Responses:

If a student fails to address a specific criterion, assign a score of 0 for that section and provide a brief justification based on its absence.

Evaluation Behavior:

Wait for the student's responses to begin evaluation. Always apply the following parameters when assessing: { "temperature": 0.1, "frequency_penalty": 0.0, "presence_penalty": -1.0 }

Appendix G.5

Correction with predefined criteria and Fine Tuning	Evaluation Criteria	Chat 1	Chat 2	Chat 3	Chat 4	Chat 5	Chat 6	Chat 7	Chat 8	Chat 9	Chat 10	Total Appearances
	Perceived Value											10
	Functional Benefits											10
	Psychological Benefits											10
	Monetary Costs											10
	Non-Monetary Costs											10
	Justification											10
	Number of Evaluation Criteria	6	6	6	6	6	6	6	6	6	6	
	Grade	5	5	5	5	5	5	5	5	5	5	

- A yellow highlight indicates each evaluation criterion from the instructor's rubric when it appears in a given Chat Session.
- Purple is used to highlight any evaluation criteria not defined by the instructor.

Appendix H

Appendix H.1

Normalized Rubric for Evaluation Criterion “Functional Benefits”

Evaluation Criterion: “Functional Benefits”

Formal definition: These are the tangible or practical elements that provide value to the player. In the case of lottery scratch cards, such benefits may include:

- **Accessibility:** Ease of acquiring or participating (points of sale, possibility of online purchase, low cost, etc.).
- **Instantaneity:** Obtaining the result at once, without having to wait for long draws. Gratification is immediate.
- **Variety of games:** Different game options available that cater to various preferences or budgets.
- **Opportunity to win:** Although the odds are low, there is a chance of obtaining a prize.

Possible score: 0, 1, or 2 points.

Definition “player context” for Functional Benefits: “Refers to how a functional benefit affects the way the player perceives, uses, or accesses the product. This may include factors such as ease of purchase, speed of use, impact on the gaming experience, purchase decision, or perception of the cost-benefit ratio.”

Note: They must focus on the player’s experience, not on other elements (e.g., the company’s profits, production costs, etc.).

Step	Evaluation question	Action	Result
1	Is at least one functional benefit (accessibility, instantaneity, variety, opportunity to win, or an equivalent) explicitly mentioned?	- No → Assign 0 points and stop the evaluation for Functional Benefits. (No clear reference is made to any practical/tangible benefit for the player).	0 points
		- Yes → Continue with Step 2.	Go to Step 2
2	Does the mentioned functional benefit truly focus on the player’s experience (not on the company, nor benefits for external agents, etc.)?	- No → Assign 0 points and stop the evaluation for Functional Benefits. (If, for example, it discusses how the company	0 points

Step	Evaluation question	Action	Result
		benefits or reduces costs, this is not a functional benefit for the player.)	
		- Yes → Continue with Step 3.	Go to Step 3
3	Is the answer for the ‘Functional Benefits’ evaluation criterion coherent, unambiguous, and free from contradictions within the same criterion?	No → Assign 1 point and stop the evaluation for Functional Benefits. (The description of the functional benefit is ambiguous, contradictory, or allows multiple interpretations, but still explicitly mentions a functional benefit from the list).	1 point
		Yes → Continue with the next question (Step 4).	Go to Step 4
4	Is the reason or idea for why the functional benefit is relevant to the player context for Functional Benefits indicated or made explicit?	- No → Assign 1 point and stop the evaluation for Functional Benefits. (The functional benefit was mentioned, but its relevance to the player context for Functional Benefits is not indicated or made explicit.)	1 point
		- Yes → Assign 2 points. (The functional benefit was mentioned, and its relevance to the player context for Functional Benefits is indicated or made explicit.)	2 points

Appendix H.2

Instructions:

Evaluate the student’s response to the question attached in the file Question.docx, strictly following the five evaluation criteria defined in the evaluation rubric: Concept of Value, Functional Benefits, Psychological Benefits, Monetary Costs, and Non-Monetary Costs.

Ignore non-evaluated aspects: Do not consider grammar, depth of analysis, clarity, style, or writing quality. Do not interpret or expand the evaluation criteria beyond what is explicitly stated in the document Points_Distribution.docx.

Evaluation Format: Use the standardized format that includes score, observation, and justification for each criterion, followed by a final score and final comments.

The correction scheme is in the document "Example_Output_Format.docx", and the score assignment is in the document "Points_Distribution.docx", which you must follow rigorously to be consistent in the distribution of points, based on the decision tables for score assignment.

Key Restriction:

Do not use any criteria such as depth, clarity, or relevance at any point in the evaluation.

Justifications must be strictly based on the examples from "Points_Distribution.docx" and "Example_Output_Format.docx", with primary focus on "Points_Distribution.docx".

Handling Incomplete Responses:

If a student fails to address a specific criterion, assign a score of 0 for that section and provide a brief justification based on its absence.

Evaluation Behavior:

Wait for the student's responses to begin evaluation. Always apply the following parameters when assessing: { "temperature": 0.1, "frequency_penalty": 0.0, "presence_penalty": -1.0 }

Appendix I

Appendix I.1

Student	Chat 1	Chat 2	Chat 3	Chat 4	Chat 5
1	5	5	5	5	5
2	6	7	7	7	7
4	9	9	9	9	9
5	6	8	8	6	8
7	6	8	6	6	8
8	5	4	6	5	5
9	5	7	5	6	7
10	4	3	5	5	3
14	9	9	8	9	9
16	6	8	6	7	6

- ii. Yellow highlighting indicates full consistency across all Chat Sessions.
- iii. Blue highlighting signifies the presence of two different assigned grades.
- iv. Red highlighting indicates three or more different assigned grades, representing a clear inconsistency.

Appendix I.2

Student	Chat 1	Chat 2	Chat 3	Chat 4	Chat 5
1	5	5	5	5	5
2	3	3	2	3	3
4	9	9	9	9	9
5	9	9	9	9	8
7	5	5	5	5	5
8	3	3	3	3	3
9	4	4	4	5	4
10	5	5	5	5	3
14	5	7	6	4	6
16	7	7	6	7	7

- i. Yellow highlighting indicates full consistency across all Chat Sessions.
- ii. Blue highlighting signifies the presence of two different assigned grades, which may be repeated.
- iii. Red highlighting indicates three or more different assigned grades, representing a clear inconsistency.

Appendix I.3

Student	Chat 1	Chat 2	Chat 3	Chat 4	Chat 5
1	5	5	5	5	5
2	1	1	1	1	1
4	9	9	9	9	9
5	9	9	9	9	9
7	6	6	6	6	6
8	3	3	3	3	3
9	5	5	5	5	5
10	4	4	4	4	4
14	7	7	7	7	7
16	5	5	5	5	5

- i. Yellow highlighting indicates full consistency across all Chat Sessions.
- ii. Blue highlighting signifies the presence of two different assigned grades.
- iii. Red highlighting indicates three or more different assigned grades, representing a clear inconsistency.

Appendix J

Appendix J.1

	All Examples				
Student	Chat 1	Chat 2	Chat 3	Chat 4	Chat 5
1	3	3	3	3	3
2	1	1	1	1	1
4	9	9	9	9	9
5	9	9	9	9	9
7	6	6	6	6	6
8	1	1	1	1	1
9	5	5	5	5	5
10	4	4	4	4	4
14	7	6	6	6	6
16	5	4	5	5	5
3	2	2	2	2	2
6	8	8	8	8	8
11	8	6	7	7	7
12	8	8	8	7	7
13	8	8	8	8	8
15	5	5	6	4	4
17	6	6	5	6	6
18	4	5	3	3	5
19	6	6	6	6	6
20	4	4	4	6	6

- i. Yellow highlighting indicates full consistency across all Chat Sessions.
- ii. Blue highlighting signifies the presence of two different assigned grades.
- iii. Red highlighting indicates three or more different assigned grades, representing a clear inconsistency.

Appendix J.2

Student	3 Examples				
	Chat 1	Chat 2	Chat 3	Chat 4	Chat 5
1	4	3	3	3	3
2	1	1	1	1	1
4	9	9	9	9	9
5	9	8	9	8	9
7	5	6	5	6	6
8	1	1	3	1	1
9	4	4	4	5	5
10	6	6	6	6	6
14	5	6	6	5	5
16	6	6	6	7	7
3	2	2	2	2	2
6	9	9	8	9	8
11	8	7	7	7	7
12	7	7	8	6	6
13	9	8	9	8	9
15	5	5	5	5	5
17	7	6	6	5	5
18	5	5	6	6	6
19	7	7	7	7	7
20	6	4	7	4	4

- i. Yellow highlighting indicates full consistency across all Chat Sessions.
- ii. Blue highlighting signifies the presence of two different assigned grades.
- iii. Red highlighting indicates three or more different assigned grades, representing a clear inconsistency.

Appendix J.3

	Without Examples				
Student	Chat 1	Chat 2	Chat 3	Chat 4	Chat 5
1	4	4	4	4	4
2	1	1	1	1	1
4	9	9	9	9	9
5	9	8	9	8	9
7	7	7	6	7	7
8	3	1	1	1	3
9	4	4	4	4	4
10	6	6	6	6	7
14	5	5	5	5	5
16	6	6	6	6	6
3	4	4	4	2	2
6	8	8	8	9	8
11	8	7	8	7	8
12	7	8	6	7	7
13	7	8	8	8	8
15	5	5	5	5	5
17	7	8	7	7	7
18	5	5	5	6	5
19	7	6	6	6	7
20	6	6	4	6	7

- i. Yellow highlighting indicates full consistency across all Chat Sessions.
- ii. Blue highlighting signifies the presence of two different assigned grades.
- iii. Red highlighting indicates three or more different assigned grades, representing a clear inconsistency.

Appendix J.4

Examples for Each Level

0 points

- **Example:** "Scratch-offs are fun."
 - **Clarification:** Incorrect because it does not explicitly state or mention a functional benefit similar to those in the definition.
- **Example:** "It's a product sold in stores."
- **Example:** "It's easy to play."
 - **Clarification:** Too general, it does not explicitly identify a clear functional benefit from the definition.

- **Example:** "You're more likely to lose, so its functional benefit is null."
 - **Clarification:** No functional benefit from the definition is explicitly mentioned by stating that it is null.
- **Example:** "Scratch-offs are accessible because their low cost allows many people to participate, which generates a lot of profit for the company."
 - **Clarification:** Although it mentions low cost, the justification is centered on the benefit to the company and not on the player's experience. This does not qualify as a functional benefit.
- **Example:** "Scratch-offs are a system that works and delivers economic benefits."
 - **Clarification:** This response is too general and does not explicitly mention a recognized functional benefit (accessibility, instantaneity, variety, chance to win). The phrase "economic benefits" is ambiguous and not directly related to the chance to win.

1 point

- **Example:** "The instant result of scratch-offs is good."
 - **Clarification:** The concept of instantaneity is mentioned, but it is not explained why this feature is relevant within the player's context.
- **Example:** "Scratch-offs are accessible because they can be easily bought in stores."
 - **Clarification:** Accessibility is explicitly mentioned, but it is not developed why this accessibility is relevant to the experience within the player's context.
- **Example:** "Scratch-offs allow for economic benefits in case of winning a prize."
 - **Clarification:** The chance to win is mentioned here, which is a functional benefit. However, it is not explained how it affects the experience in the player's context.
- **Example:** "Scratch-offs are instant because you can scratch them instantly, although in some cases it might take time to process online."
 - **Clarification:** A valid functional benefit (instantaneity) is mentioned, but it contradicts itself without explaining in which situations the online scratch-off might not be immediate.

2 points

- **Example:** "Scratch-offs are accessible because they can be easily bought at various physical locations and online, which facilitates their acquisition and allows more people to participate without complications."
 - **Clarification:** The benefit of accessibility is mentioned and correctly justified in terms of how this affects the player's experience, which is why 2 points are awarded.
- **Example:** "Since the product is cheap, many people are willing to pay the price for something that can bring a large amount of profit even though the probability is very low."
 - **Clarification:** Accessibility is mentioned and it is explained why this facilitates more people purchasing the product without a significant economic barrier.
- **Example:** "Even though the odds are almost zero, there is a chance of winning a prize equal to or greater than the cost of the scratch-off, which makes it attractive."
 - **Clarification:** The concept of chance to win is made explicit. Additionally, it explains the "why" in terms of affecting the player by stating that it is attractive since the prize can be greater than the cost of the scratch-off.
- **Example:** "Scratch-offs are notably accessible because they are available at numerous points of sale, making it easy for anyone to purchase without complications."
 - **Clarification:** The concept of accessibility is made explicit. Additionally, the "why" is explained by stating that it is available at various points of sale, which makes it easy to acquire (that is, it is justified within the player's context).
- **Example:** "Scratch-offs are characterized by their instantaneity: they allow players to enjoy a quick and direct experience without needing to invest much time."
 - **Clarification:** Instantaneity is mentioned and its relevance is justified by emphasizing that players do not have to wait to find out if they have won.
- **Example:** "Scratch-offs allow players to obtain economic benefits in case of winning a prize, which makes them attractive to players because it gives them the feeling that they can recover their investment and earn money quickly."
 - **Clarification:** The chance to win is mentioned and it is explained why this makes the scratch-off attractive to the player, since it implies a possible reward greater than the initial investment.

- **Example:** "Scratch-offs allow players to win a large prize with a value much higher than the purchase price, which makes it an attractive option for players looking for a small investment with the possibility of a high reward."
 - **Clarification:** The chance to win is mentioned, which is a functional benefit according to the definition. Additionally, its relevance in the player's context is justified by emphasizing the cost-benefit relationship, which helps explain why this benefit makes the scratch-off attractive to players. The mention of a "small investment with the possibility of a high reward" explains how the player's perception of cost influences their purchase decision.

Appendix K

ALGORITHM FOR CREATING AUTOMATIC CORRECTION

PHASE 1: DEFINITION OF THE EVALUATION CRITERIA

Step 1: Reception of the general question

You will receive an open-ended question that covers the topic to be evaluated.

Example of the general question:

Context: Think about the product category "lottery scratch cards," which is a game consisting of a card with hidden areas that the player must scratch to discover if it contains a prize. Players can buy a "scratch card," either online or at a local lottery retailer; there are various prices, consider one that costs CLP\$500.

Question: "Analyze the 'value' of playing a lottery scratch card in terms of its benefits (functional and psychological) and costs (monetary and non-monetary) for the player."

Step 2: Decomposition into concrete sub-questions

Identify each general concept of the general question.

Example of general concepts of the general question:

- Value of the game for the player.
- Benefits for the player.
- Costs for the player.

For each of the general concepts of the general question, identify the evaluation criteria.

Example of evaluation criteria for the value of the game:

- Analyze the concept of value for the player.

Example of evaluation criteria for benefits:

- Identify functional benefits for the player.
- Identify psychological benefits for the player.

Example of evaluation criteria for costs:

- Identify monetary costs for the player.
- Identify non-monetary costs for the player.

PHASE 2: CREATION OF DECISION TABLES FOR THE EVALUATION

Step 3: Define the evaluation structure of each evaluation criterion

For each evaluation criterion identified in Phase 1, Step 2, an evaluation scheme based on clear and objective rules must be created, which will be called the “evaluation structure.” An evaluation structure is made up of the following 6 parts:

1. **Evaluation criterion:** The chosen evaluation criterion from Phase 1.

Example of Evaluation criterion:

Functional Benefits for the player.

2. **Formal definition:** Explanation of what is being evaluated.

Example of Formal definition:

We evaluate the tangible elements that provide value to the player. In the case of lottery scratch cards, these benefits may include the following evaluated concepts.

3. **Evaluated concepts:** A list of the elements that make up the answer, along with their scope and definition. These will be considered for scoring.

Examples of Evaluated concepts:

- Accessibility: Ease of acquiring or participating (points of sale, the possibility of online purchase, low cost, etc.).
- Instantaneity: Receiving the result at the moment, without having to wait for long draws. Gratification is immediate.
- Variety of games: Different game options available that cater to various tastes or budgets.
- Opportunity to win: Although the odds are low, there is a chance of obtaining a prize.

4. **Possible scores:** The range of scores allowed.

Examples of Possible scores:

0, 1, or 2 points.

5. **Problem Concepts:** Definition of concepts that indicate which specific reasons or ideas will be accepted as valid justification for the fourth evaluation question and those that follow, present in Phase 2, Step 4. They are only created for those criteria in which the maximum score requires explicitly justifying why the student's answer is relevant.

Example of Problem Concepts:

Definition of "player context" for Functional Benefits: Refers to how a functional benefit affects the way the player perceives, uses, or accesses the product. This can include factors such as the ease of purchase, speed of use, impact on the gaming experience, purchase decision, or the perception of the cost-benefit ratio.

6. **Note:** Additional clarification on the evaluation criterion, evaluated concepts, or possible scores.

Example of Note:

The evaluated concepts must focus on the player's experience and not on other elements (e.g., the company's profits, production costs, etc.).

Step 4: Create the decision table for each evaluation criterion

Following the evaluation structure of each evaluation criterion (Phase 2, Step 3), create a decision table.

For each evaluation criterion identified in Phase 1, stages are created. Each stage corresponds to a row that includes four cells corresponding to each column:

- **Column 1: Step;** A unique sequential identifier to identify a stage within the decision table.

Example of Step:

1, 2, ... etc.

- **Column 2: Evaluation question;** Yes/No questions formulated based on the evaluated concepts from Phase 2, Step 3. They go from the most general to the most specific to objectively assign points.

The first question checks for the basic presence of the evaluated concepts.

Example of the first evaluation question:

Is at least one functional benefit (accessibility, instantaneity, variety, opportunity to win, or another equivalent) explicitly mentioned?

The second question checks whether the focus of the evaluated concepts is correct.

Example of the second evaluation question:

Does the mentioned functional benefit really focus on the player's experience (not on the company, or benefits for external agents, etc.)?

The third question checks that the answer does not contain inconsistencies or multiple interpretations that could lead to ambiguities or contradictions in the student's response (for instance, something correct is mentioned, followed by something incorrect).

Example of the third evaluation question:

Is the answer for the 'Functional Benefits' evaluation criterion coherent, unambiguous, and without contradictions within the same criterion?

The fourth (and subsequent questions) delve into details or justifications that determine higher scores.

Example of the fourth evaluation question:

Does it indicate or explain why the functional benefit is relevant to the player context for Functional Benefits?

- **Column 3: Action;** Specifies, for each Yes/No question, what should be done if the answer is “Yes” or “No.” In the case of “No,” a brief explanation is given.

Examples of Action:

No → Assign 0 points and stop the evaluation for Functional Benefits. (No clear reference is made to any practical/tangible benefit for the player).

Yes → Continue with Step 2.

- **Column 4: Result;** The score of the evaluation criterion or the conclusion obtained after applying the corresponding Action.

Examples of Result:

0 points

(Go to Step 2)

For each step, there are 2 stages. Not all stages contain values in the Step and Evaluation question columns. In those cases, it means that the Step and Evaluation question in question remain in effect until the Action is resolved and the Result of that Step is assigned.

PHASE 3: DEFINITION OF THE OUTPUT FORMAT

Step 5: Define the standardized response structure

For the output format, uniform examples need to be created so that all evaluations corrected by the AI follow the same output structure. For this, create a new blank document called “Example_Output_Format,” which will contain the uniform examples. Each uniform example consists of a standardized response structure and a consolidation of the final evaluation. The uniform examples are real or simulated corrections of the general question. This correction is based on the decision table for each criterion.

A standardized response structure consists of including in the Example_Output_Format document:

- **Evaluation criterion:** Name of the evaluation criterion.

Example of Evaluation criterion:**Functional Benefits**

- **Score:** Score assigned to the evaluation criterion.

Example of Score:

1/2 points

- **Observation:** Brief description of what the student mentioned in their answer.

Example of Observation:

The possibility of winning a prize is mentioned, which aligns with the chance to win in the rubric. The disadvantage is that it is mentioned as a value proposition rather than as a functional benefit. The immediacy as an online scratch card is also mentioned as a functional benefit, which aligns with the rubric.

- **Justification:** Explanation based on the decision table of why that score was assigned.

Example of Justification:

According to the rubric, functional benefits should include aspects such as accessibility, variety of games, and the chance of winning. Even though the possibility of winning is mentioned without much justification, the immediacy concept is correctly developed and justified, so it is assigned 2/2 points. It is not necessary to include all points in the rubric to obtain the full score if it is justified in relation to how they contribute to the product's functional value for this case.

Step 6: Consolidation of the final evaluation

Once the standardized response structure for a uniform example is finished, the consolidation of the final evaluation is included after the standardized response structure:

- **Final Score:** The sum of the partial scores (Score) obtained in each evaluated criterion.

Example of Final Score:

Value (0/2 points), Functional Benefits (1/2 points), Non-functional Benefits (1/2 points), Monetary Costs (2/2 points), and Monetary Costs (1/2 points) = $0/2 + 1/2 + 1/2 + 2/2 + 1/2 = 5/10$ points. Therefore, the final score is 5/10 points.

- **Final Comments:** Conclusive feedback provided to the student once the final score is assigned. These comments should summarize the main strengths or achievements of the answer, highlight areas that need further development or justification based on the questions and actions in the decision table, and offer concrete recommendations to improve future answers, avoiding vagueness or suggestions unrelated to the rubric.

Example of Final Comments:

Your answer covers some important aspects, such as functional benefits. However, to improve your score, it would be important to better define the perceived value and to justify psychological benefits and non-monetary costs in greater depth. While you mention some of these benefits, further analysis and justification were needed. For example, you could have explained more about how satisfaction and the possibility of winning a prize affect the game's value from the

player's perspective by making them want to purchase it for the chance of winning money (Sense of Competence and achievement according to the rubric) higher than the cost it involved (definition of high perceived Value).

Step 7: Repeat Phase 3

Without creating the new blank document Example_Output_Format again, repeat Step 5 and Step 6 of Phase 3 to create new uniform examples.

Perform Step 7 at least once to have a minimum of two uniform examples.

PHASE 4: CREATION OF THE EVALUATION PROMPT

Step 7: Define the components of the prompt

In this phase, you define how to create the Evaluation Prompt, a brief but very precise text that the AI will strictly follow to correct students' answers, regardless of the general question being evaluated. The prompt will consist of 6 mandatory prompt components:

1. **Evaluation Context:** Indicate the task the AI will perform, explicitly mentioning the general question and its context. Additionally, explicitly mention the evaluation criteria obtained when breaking down the general question into concrete sub-questions, as done in Phase 1, Step 2.

Example of Evaluation Context:

Evaluate the student's answer to the question attached in the file "Question.docx," strictly following the five criteria defined in the rubric: Analyze the concept of value for the player, Identify functional benefits for the player, Identify psychological benefits for the player, Identify monetary costs for the player, and Identify non-monetary costs for the player.

2. **Primary correction rules:** These are rules aimed at the correct use of the decision tables. It is indicated that the evaluation must be done using only the Decision Tables provided in a particular file. It is also indicated that the binary logic (Yes/No) of the tables must be strictly followed to assign scores.

Example of Primary correction rules:

Score assignment must follow the "Decision_Tables_Example.docx" document, which you must adhere to rigorously in order to be consistent when assigning points, based on the decision tables (Yes/No rules) for scoring.

3. **Secondary correction rules:** These rules support the primary rules. It must be explicitly stated that when correcting with the primary correction rules, no interpretations or criteria expansions outside those tables are allowed. It must also be explicitly stated that if a student does not mention an evaluation criterion, the AI must automatically assign 0 points.

Example of Secondary correction rules:

Justifications must be based solely on the "Decision_Tables_Example.docx" file, excluding criteria such as depth, clarity, or relevance not included in the decision tables. If a student does

not address a particular evaluation criterion in their answer, assign 0 points for that part with a brief justification based on its absence.

4. **Exclusion of undesired evaluation criteria:** It is made explicit that the AI should not expand or consider other implicit criteria.

Example of Exclusion of undesired evaluation criteria:

Ignore unassessed aspects: Do not consider grammar, depth of analysis, clarity, style, or writing. Do not interpret or expand the criteria beyond what is explicitly stated in the “Decision_Tables_Example.docx” document.

5. **Evaluation format:** Define how each evaluation criterion will be structured, recalling the use of the uniform examples created in Phase 3 and found in the “Example_Output_Format” file. The standardized structure and Final Evaluation Consolidation to be used are explicitly stated.

Example of Exclusion of Evaluation format:

Use the standardized format that includes Evaluation criterion, Score, Observation, and Justification for each evaluation criterion, followed by a Final Score and Final Comments. The correction scheme is in the “Example_Output_Format.docx” document, and you must always provide answers in that format.

6. **Adjust hyperparameters:** In order to avoid very different interpretations, you must explicitly indicate the hyperparameters to be used, in addition to explicitly stating that the AI must wait for the student’s answer before applying the correction. In this case, they are fixed, and the evaluation prompt always ends with this phrase:

Wait for the student’s answers to begin evaluating, and always use these hyperparameters; {"temperature": 0.1, "frequency_penalty": 0.0, "presence_penalty": -1.0}

Appendix L

Task: Strictly replicate the algorithm defined in the document "Algorithm.docx" to create:

- Specific evaluation criteria
- Complete decision tables
- Standardized evaluation format file
- Final automatic correction prompt

Context: You will be given a specific question in order to execute the algorithm from scratch, using exactly the structure examples ("Example_Output_Format.docx ") and the decision table ("Table_Decisions_Example.docx") as strict guides to replicate format, logic, and structure. For this, you will wait until I provide the question, and then we will execute the algorithm phase by phase to obtain:

1. The evaluation criteria to be assessed

2. A canvas/document with the decision tables and all their components (Formal Definition, Evaluated Concepts, Possible Scores, Problem Concepts, and Note) for each defined evaluation criterion
3. A canvas/document that contains the output format (standardized response structure with at least 2 complete examples)
4. Evaluation prompt

Mandatory Rules:

- Strictly follow the attached algorithm with no external interpretations.
- Use only the formats and logics from the document "Ejemplo_Estructura.docx" and "Table_Decisions_Example.docx" as clear and mandatory guides.

Wait until the teacher's question is given, and each time you deliver something, wait for the user's confirmation before moving on to the next phase.

Expected Output:

Deliver in an orderly manner:

- Clear list of evaluation criteria
- Complete decision tables for each criterion
- File with the final evaluation structure
- Final automatic evaluation prompt ready to use

Appendix M

Decision Table 1 for “Value Concept”

Formal definition: Evaluates whether the student explicitly defines the perceived value as “high” or “low,” based on how the perceived benefits (functional and psychological) outweigh the costs (monetary and non-monetary). In the case of a lottery scratch card, it may include:

Value: Given the low financial participation cost and the high emotional and functional entertainment benefits, many players may perceive a positive value in their gaming experience. In addition, the possibility of winning a prize, although statistically small, can significantly increase the perceived value.

Possible score: 0, 1, or 2 points.

Step	Evaluation question	Action	Result
1	Is the word “value” (or synonyms like “valuable,” “perceived value,” “valued,” etc.) explicitly mentioned?	- No → Assign 0 points and stop the evaluation for Value Concept.	0 points
		- Yes → Continue with the next question (Step 2).	Go to Step 2
2	Is the idea of benefits (functional and/or psychological) explicitly connected with costs (monetary and/or non-monetary)?	- No → Assign 0 points and stop the evaluation for Value Concept.	0 points
		- Yes → Continue with the next question (Step 3).	Go to Step 3
3	Is the answer for the ‘Value’ evaluation criterion coherent, unambiguous, and free from contradictions within the same criterion?	- No → Assign 1 point and stop the evaluation for Value Concept. (The value description is ambiguous, contradictory, or allows multiple interpretations, but still mentions the value concept and connects benefits with costs).	1 point
		- Yes → Continue with the next question (Step 4).	Go to Step 4
4	Is it stated whether the value is “high” or “low” (or equivalent) as a result of comparing benefits to costs?	- No → Assign 1 point and stop the evaluation for Value Concept. (Mentions value and connects benefits-costs, but does not specify high/low).	1 point
		- Yes → Assign 2 points (mentions value, connects benefits-costs, and also qualifies the value).	2 points

Decision Table 2 for “Functional Benefits”

Formal definition: These are the tangible or practical elements that provide value to the player. In the case of lottery scratch cards, such benefits may include:

- **Accessibility:** Ease of acquiring or participating (points of sale, possibility of online purchase, low cost, etc.).
- **Instantaneity:** Obtaining the result at once, without having to wait for long draws. Gratification is immediate.
- **Variety of games:** Different game options available that cater to various preferences or budgets.
- **Opportunity to win:** Although the odds are low, there is a chance of obtaining a prize.

Possible score: 0, 1, or 2 points.

Definition “player context” for Functional Benefits: “Refers to how a functional benefit affects the way the player perceives, uses, or accesses the product. This may include factors such as ease of purchase, speed of use, impact on the gaming experience, purchase decision, or perception of the cost-benefit ratio.”

Note: They must focus on the player’s experience, not on other elements (e.g., the company’s profits, production costs, etc.).

Step	Evaluation question	Action	Result
1	Is at least one functional benefit (accessibility, instantaneity, variety, opportunity to win, or an equivalent) explicitly mentioned?	- No → Assign 0 points and stop the evaluation for Functional Benefits. (No clear reference is made to any practical/tangible benefit for the player).	0 points
		- Yes → Continue with Step 2.	Go to Step 2
2	Does the mentioned functional benefit truly focus on the player’s experience (not on the company, nor benefits for external agents, etc.)?	- No → Assign 0 points and stop the evaluation for Functional Benefits. (If, for example, it discusses how the company benefits or reduces costs, this is not a functional benefit for the player.)	0 points
		- Yes → Continue with Step 3.	Go to Step 3
3	Is the answer for the ‘Functional Benefits’ evaluation criterion coherent, unambiguous, and free	No → Assign 1 point and stop the evaluation for Functional Benefits. (The description of the functional benefit is ambiguous, contradictory, or allows	1 point

Step	Evaluation question	Action	Result
	from contradictions within the same criterion?	multiple interpretations, but still explicitly mentions a functional benefit from the list).	
		Yes → Continue with the next question (Step 4).	Go to Step 4
4	Is the reason or idea for why the functional benefit is relevant to the player context for Functional Benefits indicated or made explicit?	- No → Assign 1 point and stop the evaluation for Functional Benefits. (The functional benefit was mentioned, but its relevance to the player context for Functional Benefits is not indicated or made explicit.)	1 point
		- Yes → Assign 2 points. (The functional benefit was mentioned, and its relevance to the player context for Functional Benefits is indicated or made explicit.)	2 points

Decision Table 3 for “Psychological Benefits”

Formal definition: These are emotional or mental aspects that provide value to the player. In the context of lottery scratch cards, they are often reflected in:

- **Entertainment:** Fun, excitement, or anticipation of winning.
- **Sense of achievement or competence:** Feeling like a “winner,” satisfaction in discovering a prize, or fulfilment from completing a challenge.
- **Social inclusion:** Sharing the experience with others, being part of a televised or media event, becoming famous, etc.

Definition “player context” for Psychological Benefits: “Refers to how a psychological benefit influences the player’s perception and emotional experience. This may include how the game generates excitement, reinforces motivation to participate, provides a sense of achievement or satisfaction, and how these factors impact the purchase decision or continued play.”

Possible score: 0, 1, or 2 points.

Note: The psychological benefit must center on the player’s experience, not on external factors (e.g., the company’s profits, benefits to third parties, etc.).

Step	Evaluation question	Action	Result
1	Is at least one psychological benefit (entertainment, excitement, sense of achievement, social inclusion, expectation of winning, or an equivalent) explicitly mentioned?	- No → Assign 0 points and stop the evaluation for Psychological Benefits. (No clear reference is made to any emotional or mental benefit for the player.)	0 points
		- Yes → Continue with Step 2.	Go to Step 2
2	Does the mentioned psychological benefit focus on the player's psychological experience (not on the company or other factors)?	- No → Assign 0 points and stop the evaluation for Psychological Benefits. (For example, if it only addresses benefits for the brand or the company, it does not apply to the player.)	0 points
		- Yes → Continue with Step 3.	Go to Step 3
3	Is the answer for the 'Psychological Benefits' evaluation criterion coherent, unambiguous, and free from contradictions within the same criterion?	No → Assign 1 point and stop the evaluation for Psychological Benefits. (The description of the psychological benefit is ambiguous, contradictory, or allows multiple interpretations, but still explicitly mentions a psychological benefit from the list).	1 point
		Yes → Continue with the next question (Step 4).	Go to Step 4
4	Is the reason or idea for why the psychological benefit is relevant to the player context for Psychological Benefits indicated or made explicit?	- No → Assign 1 point and stop the evaluation for Psychological Benefits. (The psychological benefit was mentioned, but its relevance to the player context for Psychological Benefits is not indicated or made explicit.)	1 point

Step	Evaluation question	Action	Result
		<p>- Yes → Assign 2 points.</p> <p>(The psychological benefit was mentioned, and its relevance to the player context for Psychological Benefits is indicated or made explicit.)</p>	2 points

Decision Table 4 for “Monetary Costs”

Formal definition: Monetary cost refers to the price the player must pay to participate. In the case of a scratch card:

- **Low:** The monetary cost is generally considered low (for example, CLP\$500). It does not include costs associated with the company (production, logistics) nor external factors (the player’s transportation, internet, etc.). It can also be described with synonyms such as marginal, insignificant, etc.

Possible score: 0 or 2 points.

Note: For this criterion, only 0 or 2 points are possible. There is no intermediate score.

Step	Evaluation question	Action	Result
1	Is it explicitly mentioned that the scratch card has a monetary cost (for example, CLP\$500, “low cost,” “reduced price”) focusing on the player (i.e., what the player pays to acquire the scratch card)?	- No (the price is not mentioned, production costs or transportation costs are discussed, or it is incorrectly mentioned as “high cost”) → Assign 0 points and stop the evaluation for Monetary Costs.	0 points
		- Yes (it is clearly mentioned that the scratch card has a low cost or a fixed price, and it is recognized as a cost to the player) → Continue to Step 2	Go to Step 2
2	Are any external costs to the consumer mentioned (for example, ticket production costs, logistical transportation costs, etc.)?	<p>- Yes → Assign 0 points and stop the evaluation for Monetary Costs.</p> <p>(If, for instance, it mentions production costs, logistics costs, or distribution costs, those are not relevant costs for the player.)</p>	0 points

Step	Evaluation question	Action	Result
		- No → Continue with Step 3.	Go to Step 3
3	Is the answer for the ‘Monetary Costs’ evaluation criterion coherent, unambiguous, and free from contradictions within the same criterion?	<p>No → Assign 1 point and stop the evaluation for Monetary Costs.</p> <p>(The answer mentions a monetary cost, but does so ambiguously or contradictorily, preventing a clear interpretation. This occurs, for example, if:</p> <ul style="list-style-type: none"> - The cost is mentioned as low but then is suggested to be high in another context with no clear explanation. - CLP\$500 is mentioned, but it is stated that it is not a real expense or that its impact varies without justification.) 	0 points
		<p>Yes → Assign 2 points for this evaluation criterion.</p> <p>(The monetary cost is explicitly mentioned without external costs and with no contradictions).</p>	2 points

Decision Table 5 for “Non-monetary Costs” (0 to 2 points)

Formal definition: These are costs that the player incurs without disbursing money but that still impact their experience or purchase decision. In the context of lottery scratch cards, the main non-monetary costs often mentioned are:

- **Time:** The time the player spends purchasing or scratching (travel, waiting, etc.). As small as it may be, it is still a cost to consider.
- **Risk of addiction:** The possibility that the game may foster addictive behaviors or gambling addiction.
- **Emotional impact:** Frustration, disappointment, or embarrassment at not winning (or “wasting time/money”).

Definition “player context” for Non-monetary Costs: “Refers to how a non-monetary cost affects the player’s gaming experience and purchase decision. This may include the time invested in acquiring or playing the scratch card, the risk of developing an addictive behavior, and the frustration or disappointment of not winning, and how these factors impact the purchase decision or continued play by acting as barriers to ongoing participation.”

Possible score: 0, 1, or 2 points.

Note: The non-monetary cost must be focused on the player’s experience (the player’s time, the player’s frustration, the player’s risk of addiction, etc.), not on external elements such as the company’s image or production costs.

Step	Evaluation question	Action	Result
1	Is at least one non-monetary cost (time, risk of addiction, emotional impact, or an equivalent) explicitly mentioned?	- No → Assign 0 points and stop the evaluation for Non-monetary Costs. (No clear reference is made to any non-monetary cost).	0 points
		- Yes → Continue with Step 2.	(Go to Step 2)
2	Does the mentioned non-monetary cost focus on the player’s experience (personal time, player’s addiction, frustration at losing, etc.), or does it mix/confuse external costs (company image, production times, etc.)?	- No → Assign 1 point and stop the evaluation for Non-monetary Costs. (For example, if it talks about “the company’s image,” that is not related to the player’s cost).	1 point
		- Yes → Continue with Step 3.	(Go to Step 3)
3	Is the answer for the ‘Non-monetary Costs’ evaluation criterion coherent, unambiguous, and free from contradictions within the same criterion?	No → Assign 1 point and stop the evaluation for Non-monetary Costs. (The description of the non-monetary cost is ambiguous, contradictory, or allows multiple interpretations, but still explicitly mentions a non-monetary cost from the list).	1 point
		Yes → Continue with the next question (Step 4).	Go to Step 4

Step	Evaluation question	Action	Result
3	Is the reason or idea for why the non-monetary cost is relevant to the player context for Non-monetary Costs indicated or made explicit?	<p>- No → Assign 1 point and stop the evaluation for this criterion.</p> <p>(The non-monetary cost was mentioned, but its relevance to the player context for Non-monetary Costs is not indicated or made explicit.)</p>	1 point
		<p>- Yes → Assign 2 points.</p> <p>(The non-monetary cost was mentioned, and its relevance to the player context for Non-monetary Costs is indicated or made explicit.)</p>	2 points

Appendix N

Surprise Quiz 2 – Marketing

NovaAndes University developed CaryBloc, a medication that eliminates and prevents primary-stage cavities at a low cost. It already holds a patent in the United States and is awaiting authorization in Europe for clinical trials. According to the WHO, cavities affect 3.5 billion people and their treatment accounts for between 5% and 10% of health expenditure in developed countries. CaryBloc is for professional use, intercepts the advancement of cavities, and does not stain teeth. It does not require special equipment or complex techniques, which reduces its commercial cost. There are two types of toothpaste according to their fluoride concentration, measured in ppm (parts per million), indicating how many fluoride units exist per million units of toothpaste:

- **Cosmetic:** 1,000–1,500 ppm (daily use).
- **Pharmaceutical:** more than 1,500 ppm (high risk of cavities).

Suppose a CaryBloc toothpaste, with the medication incorporated, is launched at a price similar to pharmaceutical brands such as Vitis, Sensodyne, or PHB.

Does including the “CaryBloc” medication in the toothpaste formula represent a competitive advantage based on VRIO resources? Justify your answer by evaluating whether it meets the criteria of Value, Rarity, Inimitability, and Organization (12 Points)

Appendix O

Valuable: According to the second paragraph of the text, “untreated cavities are the most common disorder among oral diseases, affecting nearly 3.5 billion people worldwide,” so the fact that the “CaryBloc” toothpaste eliminates and preventively treats cavities is a feature that provides value to the market. (3 Points)

Rare: This formula is not currently available in other toothpastes, so competitors would not have this differentiating feature. Replicating it would take time, which reinforces its rarity in the market. (3 Points)

Inimitable: “CaryBloc” holds a patent in the U.S. and requires clinical trials in Europe, implying that, at least in the short to medium term, it is difficult to imitate. However, this condition could change in the long term. (3 Points)

Organization: Since the treatment does not require special equipment or complex techniques and its low cost makes it commercially accessible, it can be inferred that the organization is positioned to implement and capture the value derived from this resource. (3 Points)

Appendix P

1. **Evaluation Criterion:** Concept of Value for the player

Evaluation Criterion

Concept of Value for the player

Formal Definition

Evaluates whether the student explicitly defines perceived value as “high” or “low” based on the relationship between perceived benefits (functional and/or psychological) and perceived costs (monetary and/or nonmonetary).

Concepts Evaluated

- Positive (high) value: Perceived benefits exceed perceived costs.
- Negative or low value: Perceived costs exceed perceived benefits.

Possible Scores

0, 1, or 2 points.

Problem Concepts

“Benefit-Cost Relationship” for Value: This refers to whether the student explicitly compares the benefits (functional and/or psychological) with the costs (monetary and/or nonmonetary), arriving at a rating of “high,” “low,” or equivalent synonyms.

Note

The definition of value must be centered on the player’s perspective, not on the company.

Decision Table for the Concept of Value

Step	Evaluation Question	Action	Result
1	Does it explicitly mention the term “value” or synonyms (e.g., “perceived value,” “valuable,” “valued”)?	No → Assign 0 points and stop the Value evaluation. (It does not link the scratch card to the notion of value for the player) Yes → Continue to Step 2.	0 points / Go to Step 2
2	Is the idea of benefits (functional/psychological) explicitly connected with costs (monetary/nonmonetary)?	No → Assign 0 points and stop the Value evaluation. (It does not establish the benefit-cost relationship) Yes → Continue to Step 3.	0 points / Go to Step 3
3	Is the answer for the ‘Value’ evaluation criterion coherent, without major contradictions or ambiguities?	No → Assign 1 point and stop the Value evaluation. (It mentions value and the benefit-cost relationship, but in a confusing/contradictory manner) Yes → Continue to Step 4.	1 point / Go to Step 4
4	Does it indicate whether the value is “high” or “low” (or an equivalent) when comparing benefits and costs?	No → Assign 1 point and stop the Value evaluation. (It mentions value and its benefit-cost relationship but does not rate it as high or low) Yes → Assign 2 points.	1 point / 2 points

2. Evaluation Criterion: Functional Benefits for the player

Evaluation Criterion

Functional Benefits for the player

Formal Definition

These are the tangible or practical elements that bring value to the player. According to “Teaching_Guidelines,” these include:

- Accessibility (availability of purchase, variety of points of sale, low cost that facilitates acquisition).
- Instantaneity (finding out the result immediately).
- Variety of games (scratch cards with different prices and themes).
- Opportunity to win (even though the probability may be low, there is still a chance of getting a prize).

Concepts Evaluated

- Accessibility
- Instantaneity
- Variety of games
- Opportunity to win

Possible Scores

0, 1, or 2 points.

Problem Concepts

“Player Context” for Functional Benefits: Refers to how a functional benefit (accessibility, instantaneity, variety, opportunity to win) influences the real experience of the player (for example, ease of purchase, speed of use, impact on the purchase decision).

Note

They must focus on the player’s experience and convenience, not on advantages for the company or third parties.

Decision Table for Functional Benefits

Step	Evaluation Question	Action	Result
1	Does it explicitly mention at least one functional benefit (accessibility, instantaneity, variety of games, chance to win, or an equivalent) for the player?	<p>No → Assign 0 points and stop the Functional Benefits evaluation. (No clear reference is made to any practical/tangible benefit focused on the player).</p> <p>Yes → Continue to Step 2.</p>	0 points / Go to Step 2
2	Is the mentioned functional benefit truly focused on the player’s experience (not on the company or other external factors)?	<p>No → Assign 0 points and stop the Functional Benefits evaluation. (For example, if the focus is on the company’s profits, it is not a functional benefit for the player).</p>	0 points / Go to Step 3

Step	Evaluation Question		Action	Result
			Yes → Continue to Step 3.	
3	Is the answer for the 'Functional Benefits' evaluation criterion coherent, without major contradictions or ambiguities?	No → Assign 1 point and stop the Functional Benefits evaluation. (It mentions a benefit, but it is ambiguous or contradictory). Yes → Continue to Step 4.		1 point / Go to Step 4
4	Does it indicate or explain why the functional benefit is relevant in the player's context (ease of purchase, speed of use, impact on the purchase decision, etc.)?	No → Assign 1 point and stop the Functional Benefits evaluation. (The benefit is mentioned, but its relevance to the player is not explored). Yes → Assign 2 points.		1 point / 2 points

3. Evaluation Criterion: Psychological Benefits for the player

Evaluation Criterion

Psychological Benefits for the player

Formal Definition

These are the emotional or mental aspects that generate value for the player. According to "Teaching_Guidelines," they may be:

- Entertainment (excitement, anticipation, fun).
- Sense of achievement or competence (adrenaline, personal success).
- Social inclusion (sharing with others, feeling part of a group).

Concepts Evaluated

- Entertainment
- Sense of achievement or competence
- Social inclusion

Possible Scores

0, 1, or 2 points.

Problem Concepts

"Player Context" for Psychological Benefits: Refers to how the psychological benefit impacts the

player's emotional experience (motivation, satisfaction, sense of achievement, social connection, etc.).

Note

It must be centered on the player's psychological experience; any other factor not related to their emotional experience is excluded.

Decision Table for Psychological Benefits

Step	Evaluation Question	Action	Result
1	Does it explicitly mention at least one psychological benefit (entertainment, sense of achievement, social inclusion, excitement, anticipation, or another)?	No → Assign 0 points and stop the Psychological Benefits evaluation. (No reference is made to any emotional or mental benefit for the player). Yes → Continue to Step 2.	0 points / Go to Step 2
2	Is the mentioned psychological benefit really focused on the player's emotional experience (not on the company or other external factors)?	No → Assign 0 points and stop the Psychological Benefits evaluation. (If it speaks of benefits for the brand, it is not a psychological benefit for the player). Yes → Continue to Step 3.	0 points / Go to Step 3
3	Is the answer for the 'Psychological Benefits' criterion coherent, without major contradictions or ambiguities?	No → Assign 1 point and stop the Psychological Benefits evaluation. (There is mention of a psychological benefit, but the explanation is confusing or contradictory). Yes → Continue to Step 4.	1 point / Go to Step 4
4	Does it indicate or explain why that psychological benefit is relevant in the context of the player (how it influences their perception or gaming experience, motivation, satisfaction, etc.)?	No → Assign 1 point and stop the Psychological Benefits evaluation. (The benefit is mentioned, but its relevance to the player is not clarified). Yes → Assign 2 points.	1 point / 2 points

4. **Evaluation Criterion:** Monetary Costs for the player

Evaluation Criterion

Monetary Costs for the player

Formal Definition

Refers to the price the player pays to participate in the game (e.g., CLP\$500). It includes the perception of whether this cost is high or low, in accordance with “Teaching_Guidelines.”

Concepts Evaluated

- Purchase price (for example, CLP\$500).
- Perceived cost (how justified the player sees this expense).

Possible Scores

0 or 2 points.

(There is no score of 1 in this criterion, according to the logic shown in the examples.)

Problem Concepts

No partial justification applies (no additional “problem concept” for an intermediate score).

Note

If the monetary cost is described incorrectly (for example, production costs of the company instead of what the player pays), 0 points are assumed.

Decision Table for Monetary Costs

Step	Evaluation Question	Action	Result
1	Does it explicitly mention the monetary cost the player pays (for example, CLP\$500, “low cost,” “reduced price”)?	No → Assign 0 points and stop the Monetary Costs evaluation. (It does not recognize the real expense for the player). Yes → Continue to Step 2.	0 points / Go to Step 2
2	Does it mention costs unrelated to the player (for example, the company’s production costs, logistical costs) as though they were the player’s monetary costs?	Yes → Assign 0 points and stop the Monetary Costs evaluation. (It confuses the company’s costs with those of the player)	0 points / Go to Step 3

Step	Evaluation Question	Action	Result
		No → Continue to Step 3.	
3	Is the response about the monetary cost coherent, without contradictions (for example, not saying at first that it is “very high” and then “insignificant” without explanation)?	No → Assign 0 points and stop the Monetary Costs evaluation. (It is mentioned, but is contradictory and prevents a clear interpretation). Yes → Assign 2 points (proper mention with no major contradictions or confusions).	0 points / 2 points

5. Evaluation Criterion: Nonmonetary Costs for the player

Evaluation Criterion

Nonmonetary Costs for the player

Formal Definition

These are costs the player incurs without spending money, but which affect their experience or purchase decision. According to “Teaching_Guidelines,” they may be:

- Time (in buying, scratching, or searching for the product).
- Risk of addiction (the ease of falling into compulsive gaming habits).
- Emotional impact (frustration upon not winning, etc.).

Concepts Evaluated

- Time
- Risk of addiction
- Emotional impact (frustration, disappointment, etc.)

Possible Scores

0, 1, or 2 points.

Problem Concepts

“Player Context” for Nonmonetary Costs: Refers to how these costs (time, risk of addiction, emotional impact) influence the player’s motivation, satisfaction, and continued gameplay.

Note

It must be centered on the player (for example, their time, their risk of addiction, their possible disappointment). It does not apply to company costs or third-party costs.

Step	Evaluation Question	Action	Result
1	Does it explicitly mention at least one nonmonetary cost (time, risk of addiction, emotional impact, etc.) that affects the player?	No → Assign 0 points and stop the Nonmonetary Costs evaluation. (No clear reference is made to any nonmonetary cost). Yes → Continue to Step 2.	0 points / Go to Step 2
2	Is the mentioned nonmonetary cost focused on the player's experience (their personal time, their frustration, their risk of addiction) and not on external costs of the company or other entities?	No → Assign 1 point and stop the Nonmonetary Costs evaluation. (It was confused with an external company cost or a factor that does not fall on the player). Yes → Continue to Step 3.	1 point / Go to Step 3
3	Is the response about 'Nonmonetary Costs' coherent, without major contradictions or ambiguities?	No → Assign 1 point and stop the Nonmonetary Costs evaluation. (It is mentioned, but the explanation is confusing or contradictory). Yes → Continue to Step 4.	1 point / Go to Step 4
4	Does it indicate or explain why this nonmonetary cost is relevant in the player's context (time, risk of addiction, frustration, etc.) and how it affects their experience or purchase decision?	No → Assign 1 point and stop the Nonmonetary Costs evaluation. (It mentions the nonmonetary cost but does not justify its relevance to the player). Yes → Assign 2 points (mention and clear explanation of its impact on the player).	1 point / 2 points

Appendix Q

GUIDELINE OF DEFINITIONS AND EVALUATED CONCEPTS

1. Evaluation Criterion: Concept of Value for the player

Formal Definition:

Evaluates whether the student explicitly defines the perceived value as “high” or “low” based on the relationship between perceived benefits (functional and psychological) and perceived costs (monetary and nonmonetary).

Concepts Evaluated:

- **Positive Value:** The value is considered high when the perceived benefits (functional and/or psychological) exceed the perceived costs (monetary and/or nonmonetary). In this case, the player perceives that participating in the game gives them more than what it costs.
- **Negative or Low Value:** The value is considered low when perceived costs exceed perceived benefits. In this case, the player feels that the money and time invested are not justified by the benefits obtained.

Possible Scores: 0, 1, or 2 points.

Evaluation Rules:

- **0 points:** Does not mention the concept of value or does not relate it to benefits and costs.
 - **1 point:** Mentions the concept of value, but the explanation is ambiguous or incomplete.
 - **2 points:** Clearly defines value as the result of the relationship between benefits and costs.
-

2. Evaluation Criterion: Functional Benefits for the player

Formal Definition:

These are the tangible or practical elements that provide value to the player.

Concepts Evaluated:

- **Accessibility:** How easily a player can acquire or participate in the game. This includes the existence of multiple points of sale (physical stores, supermarkets, service stations), the option to buy online, the availability of the game in different formats, and an affordable cost that allows more players to participate.
- **Instantaneity:** Refers to how quickly the player obtains a result. In the case of a scratch card, gratification is immediate, as the player instantly knows if they have won or not, without having to wait for long draws.

- **Variety of Games:** The diversity of options available for different types of players. There are scratch cards of different prices, themes, and gameplay mechanics, allowing them to cater to various tastes and preferences.
- **Opportunity to Win:** The possibility of obtaining a prize, although statistically low, influences the player's perception and purchase decision.

Possible Scores: 0, 1, or 2 points.

Evaluation Rules:

- **0 points:** Does not mention any functional benefit.
 - **1 point:** Mentions at least one functional benefit, but without justifying its relevance to the player's experience.
 - **2 points:** Mentions a functional benefit and explains its importance in the player's context.
-

3. Evaluation Criterion: Psychological Benefits for the player

Formal Definition:

These are the emotional or mental aspects that create value for the player.

Concepts Evaluated:

- **Entertainment:** The scratch card generates excitement, anticipation, and fun for the player. It can be viewed as a form of leisure and a playful experience that provides satisfaction beyond winning or losing.
- **Sense of Achievement or Competence:** The possibility of winning reinforces the feeling of success and personal accomplishment. Even if no prize is obtained, the simple act of participating can generate adrenaline and excitement.
- **Social Inclusion:** Playing the lottery can be a shared experience with friends or family, reinforcing social connections. In some cases, participating in media events or large-scale draws can make the player feel part of a community.

Possible Scores: 0, 1, or 2 points.

Evaluation Rules:

- **0 points:** Does not mention any psychological benefit.
 - **1 point:** Mentions a psychological benefit, but does not justify its impact on the player's experience.
 - **2 points:** Mentions a psychological benefit and explains how it affects the player's experience.
-

4. Evaluation Criterion: Monetary Costs for the player

Formal Definition:

Refers to the price the player must pay to participate in the game.

Concepts Evaluated:

- **Purchase Price:** The amount of money the player must pay to acquire the lottery scratch card (e.g., CLP\$500).
- **Perceived Cost:** How the player perceives whether that price is high or low in relation to their gaming experience. For some players, a low cost means a minimal entry barrier, while for others it may seem like an unnecessary expense.

Possible Scores: 0 or 2 points.

Evaluation Rules:

- **0 points:** Does not mention the monetary cost or describes it incorrectly.
 - **2 points:** Clearly mentions the game's monetary cost and relates it to the player's experience.
-

5. Evaluation Criterion: Nonmonetary Costs for the player

Formal Definition:

These are costs that the player takes on without spending money, but which affect their experience or purchase decision.

Concepts Evaluated:

- **Time:** The time the player invests in buying or playing. This includes travel, waiting times, or the effort of finding a point of sale.
- **Risk of Addiction:** The potential danger of developing compulsive gambling habits. The easy access and immediate gratification can increase the risk of gambling addiction.
- **Emotional Impact:** Disappointment, frustration, or dissatisfaction at not winning can affect the player's perception of the gaming experience and their emotional well-being.

Possible Scores: 0, 1, or 2 points.

Evaluation Rules:

- **0 points:** Does not mention any nonmonetary cost.
- **1 point:** Mentions a nonmonetary cost, but does not explain its impact on the player's experience.
- **2 points:** Mentions a nonmonetary cost and explains how it affects the player's experience.

Appendix R

1) EVALUATION CRITERION: VALUE

1.1 Formal Definition

It is evaluated whether the toothpaste with “CaryBloc” provides or generates value for the market and/or the consumer. In this case, the value considered is related to the prevention and elimination of cavities, accessibility, and any other advantage that makes it relevant to the target audience. The student is expected to identify why this innovation is valuable in addressing the need to stop or avoid cavities, which affect 3.5 billion people worldwide.

1.2 Concepts Evaluated

- **Contribution to the market and the consumer:** The ability of “CaryBloc” to offer a functional benefit in cavity prevention.
- **Solution to a widespread health problem:** It provides a benefit related to an issue that affects a large portion of the population.
- **Perception of greater effectiveness:** Compared to other toothpastes, the incorporated medication may represent an advance in the prevention and treatment of cavities.

1.3 Possible Scores

0, 1, 2, or 3 points (a maximum of 3).

1.4 Problem Concepts

Definition of “Relevance of Value” for the consumer: Refers to how the toothpaste with “CaryBloc” is perceived as a significant solution. It implies that the innovation addresses a real need and improves the consumer experience (for example, reducing dental treatment costs, ensuring more effective prevention, etc.).

1.5 Note

To award the maximum score, it is necessary for the student to connect the need to prevent cavities (the magnitude of the problem) with the value provided by “CaryBloc” as a resource capable of reducing, intercepting, or eliminating cavities in an accessible way.

1.6 Decision Table for Value

Step	Evaluation Question	Action	Result
1	Does it explicitly mention that “CaryBloc” (or its effects) provides a relevant benefit to the	No → Award 0 points and stop the Value evaluation. (No relationship is established between “CaryBloc” and a real	0 points or

Step	Evaluation Question	Action	Result
	consumer or the market, in terms of cavity prevention/treatment?	benefit or the cavity problem) Yes → Continue to Step 2.	Go to Step 2
2	Is it explained (even briefly) why this benefit is valuable, considering the magnitude of the cavity problem or other positive implications for the consumer?	No → Award 1 point and stop the Value evaluation. (“CaryBloc” is recognized as a resource, but its relevance or the need for cavity prevention is not clearly justified) Yes → Continue to Step 3.	1 point or Go to Step 3
3	Is the answer coherent, with no contradictions, and does it explicitly allude to the importance of “CaryBloc” given the high incidence of cavities (3.5 billion people)?	No → Award 2 points and stop the Value evaluation. (The value of “CaryBloc” is mentioned, but there are ambiguities or partial contradictions) Yes → Continue to Step 4.	2 points or Go to Step 4
4	Is it clearly concluded or inferred that the “CaryBloc” resource provides a value advantage (for example, reducing treatment costs, offering a far-reaching solution, etc.)?	No → Award 2 points and stop the Value evaluation. (It mentions the value but does not clarify what the specific advantage or benefit is) Yes → Award 3 points (Value fully demonstrated).	2 points or 3 points

2) EVALUATION CRITERION: RARITY

2.1 Formal Definition

It evaluates whether the innovation (toothpaste that incorporates “CaryBloc”) is unique or uncommon in the market, i.e., if there are other similar alternatives or if the resource is so differentiated that it is rare to find among competitors.

2.2 Concepts Evaluated

- **Availability of the formula on the market:** Whether including a medication that halts the progression of cavities is uncommon.
- **Exclusivity:** Whether the student mentions that there are no similar products today or that replicating the formula would require time and research development.

- **Clear differentiation:** Whether the product can be easily distinguished from other pharmaceutical or cosmetic toothpastes.

2.3 Possible Scores

0, 1, 2, or 3 points.

2.4 Problem Concepts

Definition of “Market Rarity”: Related to the exclusivity or scarcity of the “CaryBloc” resource. It means that it is not easily found in other competitors, and therefore it is a distinctive feature.

2.5 Note

To obtain the highest score, the answer must clearly indicate that “CaryBloc” is not only an uncommon attribute but also that the average competitor would not have an identical technology in the short term.

2.6 Decision Table for Rarity

Step	Evaluation Question	Action	Result
1	Does it mention that the “CaryBloc” formula is not present in conventional toothpastes or that it is a differentiated resource?	No → Award 0 points and stop the Rarity evaluation. (The innovation’s rarity is not established) Yes → Continue to Step 2.	0 points or Go to Step 2
2	Is it argued or hinted that replicating “CaryBloc” (or its effect) is not something competitors can quickly adopt (for example, due to patents, development, costs, etc.)?	No → Award 1 point and stop the Rarity evaluation. (Its differentiation is mentioned, but there is no reference to the difficulty of replicating it) Yes → Continue to Step 3.	1 point or Go to Step 3
3	Does the answer remain coherent and imply that the student understands that this is a scarce resource in the current market?	No → Award 2 points and stop the Rarity evaluation. (Rarity is mentioned, but there are ambiguities/contradictions) Yes → Continue to Step 4.	2 points or Go to Step 4
4	Is it clearly stated that this rarity provides a real differentiating factor compared to other pharmaceutical toothpastes? (e.g.,	No → Award 2 points and stop the Rarity evaluation. (The rare factor is acknowledged, but it is not stated that it constitutes a significant competitive advantage)	2 points or

Step	Evaluation Question	Action	Result
	“No one else offers ‘CaryBloc’ these days.”)	Yes → Award 3 points (Rarity fully demonstrated).	3 points

3) EVALUATION CRITERION: INIMITABILITY

3.1 Formal Definition

It verifies whether the inclusion of “CaryBloc” is difficult for competitors to imitate. It analyzes the existence of patents, R&D investment, development complexity, clinical trials, etc. If these barriers are sufficiently strong in the short/medium term, it is considered inimitable.

3.2 Concepts Evaluated

- **Patent (U.S.) and clinical trials:** Indicates protection and complexity for others.
- **Time or cost barriers to replication:** Developing a similar resource would require significant investment and scientific validation.
- **Possibility of the resource being copied in the long term:** Recognition that in the future, the patent may expire, or a substitute may be found.

3.3 Possible Scores

0, 1, 2, or 3 points.

3.4 Problem Concepts

Definition of “Difficulty of Imitation”: Focuses on competitors’ ability to reproduce the “CaryBloc” formula. It involves legal aspects (patents), technical aspects (clinical research), and time-related factors (how quickly it could be copied).

3.5 Note

It is sufficient for the student to identify that the patent and clinical trials make imitation difficult in the short/medium term, even if they acknowledge the possibility of future imitation.

3.6 Decision Table for Inimitability

Step	Evaluation Question	Action	Result
1	Does it mention the existence of barriers (such as patents, clinical trials, or others) that make “CaryBloc” difficult to imitate?	No → Award 0 points and stop the Inimitability evaluation. (No factor is mentioned to prevent	0 points or

Step	Evaluation Question	Action	Result
		copying) Yes → Continue to Step 2.	Go to Step 2
2	Is it explicitly stated that these barriers operate at least in the short or medium term, making it difficult for competitors to replicate “CaryBloc”?	No → Award 1 point and stop the Inimitability evaluation. (The patent or barrier is mentioned, but its temporal effect is not explained) Yes → Continue to Step 3.	1 point or Go to Step 3
3	Is the answer coherent, with no contradictions, recognizing that in the long term copies could emerge but there is still a significant advantage in the meantime?	No → Award 2 points and stop the Inimitability evaluation. (There is a mention of difficult imitation, but with inconsistencies or without clarifying the current advantage) Yes → Continue to Step 4.	2 points or Go to Step 4
4	Is it emphasized that the patent, along with clinical validations, complicates copying and provides clear competitive protection?	No → Award 2 points and stop the Inimitability evaluation. (It is mentioned that imitation is difficult, but the strength of the protection is not highlighted) Yes → Award 3 points (Inimitability demonstrated).	2 points or 3 points

4) EVALUATION CRITERION: ORGANIZATION

4.1 Formal Definition

It analyzes whether the company (or NovaAndes University in collaboration with a partner) has the resources and organizational structure necessary to take advantage of the competitive advantage provided by “CaryBloc.” This includes production capacity, distribution, marketing, and any factor that enables the “capture” of value from this innovation.

4.2 Concepts Evaluated

- **Ability to implement the resource:** That it does not require expensive equipment or technical complications.
- **Low production cost and commercial feasibility:** Fosters the widespread availability of the toothpaste and facilitates marketing.

- **Alignment with the value chain:** The organization is prepared to distribute and promote the product in the market.

4.3 Possible Scores

0, 1, 2, or 3 points.

4.4 Problem Concepts

Definition of “Organizational Structure”: Refers to the arrangement of NovaAndes University or associated companies to develop, launch, and sustain production of the “CaryBloc” toothpaste (patents, partnerships, sales channels, etc.).

4.5 Note

For the maximum score, the answer must clearly show that the company/entity is positioned to exploit the resource (for example, “no complex techniques are required” and “the cost is low”), which demonstrates an organization that sustains the competitive advantage.

4.6 Decision Table for Organization

Step	Evaluation Question	Action	Result
1	Is there mention of infrastructure or an organization that allows leveraging “CaryBloc” (e.g., does not require complex equipment, commercial cost is low, etc.)?	No → Award 0 points and stop the Organization evaluation. (Nothing is mentioned about the company’s ability to exploit the resource) Yes → Continue to Step 2.	0 points or Go to Step 2
2	Is it recognized that this organizational capacity (ease of use/production) facilitates getting the toothpaste to the market?	No → Award 1 point and stop the Organization evaluation. (Something about the infrastructure is mentioned, but it does not clarify the ease of reaching the market) Yes → Continue to Step 3.	1 point or Go to Step 3
3	Is the answer coherent and does it refer to the coordination of resources and strategies necessary to market the “CaryBloc” toothpaste without contradicting itself?	No → Award 2 points and stop the Organization evaluation. (Infrastructure is mentioned, but with inconsistencies or contradictions) Yes → Continue to Step 4.	2 points or Go to Step 4

Step	Evaluation Question	Action	Result
4	Is it emphasized that the organization (or the university) is truly ready to extract and sustain the competitive advantage (e.g., feasible large-scale launch, affordable cost, etc.)?	No → Award 2 points and stop the Organization evaluation. (There is no sufficient data to ensure full exploitation) Yes → Award 3 points (Organization fully demonstrated).	2 points or 3 points

Appendix S

	New Question (Without Examples)				
Student	Chat 1	Chat 2	Chat 3	Chat 4	Chat 5
1	7	7	7	8	7
2	8	8	8	8	8
3	6	6	7	6	8
4	11	11	11	11	11
5	11	11	11	11	11
6	9	9	7	7	7
7	9	10	9	9	9
8	7	7	8	7	8
9	7	7	6	7	7
10	9	9	9	9	9
11	9	9	10	9	9
12	10	10	10	10	10
13	10	9	10	10	10
14	8	8	8	8	8
15	11	11	11	11	11
16	12	12	12	12	12
17	10	10	8	8	8
18	5	5	5	5	5
19	7	7	7	7	7
20	12	12	12	12	12

- Yellow highlighting indicates full consistency across all Chat Sessions.
- Blue highlighting signifies the presence of two different assigned grades.
- Red highlighting indicates three or more different assigned grades, representing a clear inconsistency.

Appendix T

Link to full procedural log Appendices R, P and GPT-4o failing in replicating the algorithm: [\[link\]](#)