# Gamified ADDIE for LINC instruction

By Brittany Hack, Canada

Under ideal circumstances, every LINC instructor would be trained with the skills and know-how of an instructional designer. But as the pandemic taught us, instructors are often left to struggle on their own and do their utmost to engage their learners. But there is one simple rule that can be borrowed from this profession—a design process known as ADDIE. And when used in conjunction with gamification, it can simultaneously simplify, energize, and revolutionize your students.

This article will discuss a very brief overview of the ADDIE Model, how ADDIE maps onto LINC, PBLA, and Can Do statements, and how (by following ADDIE design process) gamification can meet the CLB and Can Do statements in an engaging way.

## Welcome to the world of ADDIE

ADDIE is a learning design model used in various public and private industries to create and run training/educational pilots (Elm Learning, n.d.). Due to the high costs of learning programs, much effort is placed on perfecting the design process. The pros and cons of this model are mixed online, since each industry's needs will vary. Do not let this deter you. ADDIE can be more useful to a LINC instructor than one may think.

As the acronym states, ADDIE stands for Analyse, Design, Develop, Implement, and Evaluate (E-learning Infographics, 2017; Elm Learning, n.d.; Penn State University, 2000; ). Think of it like this. Analyse asks the who, what, and where questions; you are reviewing your needs assessments against your curriculum goals and the themes your students have agreed upon.

Design asks how—how will this technique look: organizing your materials against those goals. Develop streamlines this process into a simple game structure for the limited time allotted. This forces instructors to go from theoretical to practice, quantifying those goals. Implement asks when do I put this into effect. Is it a warm-up activity? Is this consolidation practice? Evaluate asks what happened, and if you achieved your goals. Did this do what you wanted and would you do it again?

The ADDIE model can be used in a linear and or circular manner depending on the project design. If you have created a game and it was not successful (evaluation) in achieving your language learning goals, take the information from that evaluation and go back to analysis for the next iteration. But even a successful design can also benefit from another round of ADDIE, refining it, or possibly expanding the scope or adapting it to other language learning goals.

An instructional designer can help with the heavy lifting by modifying the bullets in the diagrams below into clear question statements tailored for LINC. They will do this by deep diving into the Portfolio-Based Language Assessment (PBLA) principles (PBLA Practice Guidelines, n.d.) and Canadian Language Benchmark (CLB) curriculum (Centre for Canadian Language Benchmarks, 2013; 2019) for specific information.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| **Analyse** | **Design** | **Develop** | **Implement** | **Evaluate** |
| Target Audience<br>Problem Identification<br>Learning Needs<br>Learning Goals<br>Available Resources | Lesson Plan Outline<br>Methodology<br>Objectives<br>Outcomes<br>Goals<br>Learning Activities<br>Create Assessments<br>Initial Management Approval | Full Lesson Plan<br>Reviewing Resources<br>Instruction Development<br>Peer Editing/ Reviewing<br>Testing Digital Artifacts<br>Management Final Approval | Classroom Preparation<br>Environment Prep<br>Conduct Instruction/ Training<br>Student Participation<br>Surveys<br>Student/ Teacher Reflection | Observations<br>Fill Out Assessments<br>Report to Management<br>Review and Revise for Improvement |

Table 1: ADDIE Linear Chart
(E-Learning Infographics.com, 2017)

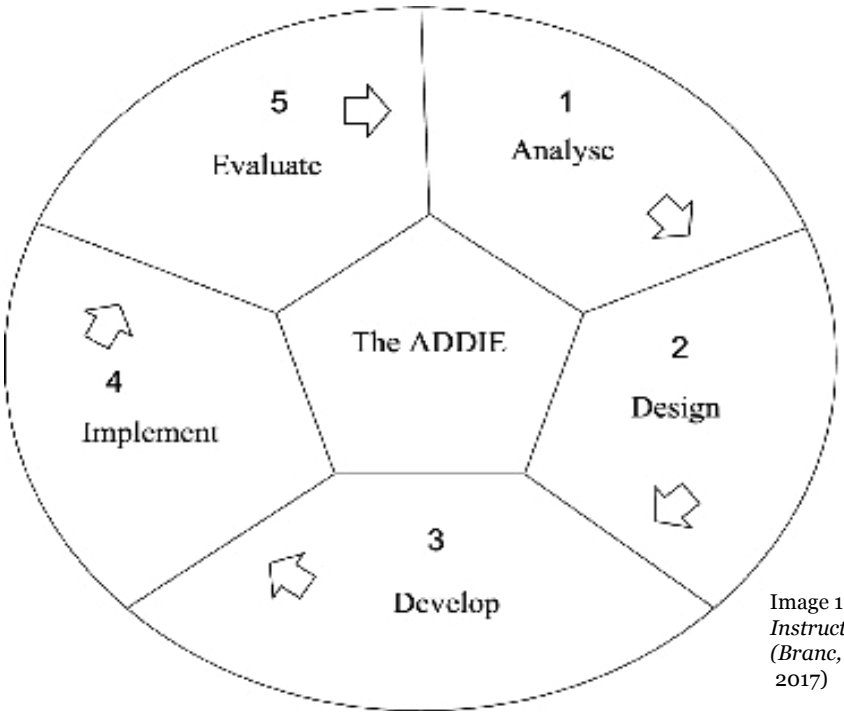


Image 1:
*Instructional Design: The ADDIE approach (Branc, 2009 in* E-Learning Infographics.com, 2017)



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## Why ADDIE matters to LINC instruction

The PBLA (PBLA Practice Guidelines, n.d.) consists of 7 principles which include: being learner-centered, needs-based, real-world, task-based, CLB-aligned, competency-based, and having communicative competence.

ADDIE aligns with most of these as the design model is learner-centered and outcome-driven. When an instructional designer identifies this type of alignment with a curriculum, they smile, for it is very clear that the model is good—in this case, a very good model for LINC. At the same time, the 2 remaining principles (real-world tasks and task-based learning) have a gap; it is at this point where the instructional designer will investigate more alternatives to meet expectations—in this case, to cover the 2 remaining two principles of PBLA.

## How gamification fills in the gaps for ADDIE

Gamification covers the remaining principles used in PBLA in two ways. First, gamification mechanics can act as a bridge to real-world tasks depending on the activities it incorporates. Second, different types of games may already include or can be adapted to, include task-based elements. Such inclusion of gamified features will likely be more forgiving when making mistakes.

This environment could be very beneficial to students who are shy or who come from cultures that are critical of making mistakes (Jaramillo-Mediavilla et al., 2024). A gamified learning environment may ease this tension. Gamified lessons can also be adapted to include a wide set of age groups while maintaining a balance between active learning and having fun. With digital and physical options, the selection of past, current, and upcoming games is endless. With gamification, the LINC instructor has the flexibility to choose the most appropriate game(s) to utilize in their classroom.

## Defining what gamification means to LINC

Online, there are many definitions of gamification—typically sector-specific in nature (Luo, 2021). Luo discusses multiple definitions, elements and approaches to gamification in learning. They review several studies that identify different gamification elements, such as badges, leaderboards, challenges, and points, which have been applied in educational contexts. It highlights how researchers often draw from existing gamification theories, adapt psychological and educational theories, or even develop their own unique gamification approaches to integrate game elements into learning environments.

The growing amount and variety of games can also challenge the instructor's interpretation of what a game should or could entail. Additionally, the CLBs and PBLA do not have any definition of what gamification entails to LINC. Without a clear unified explanation of these mechanics, implementation within Adult ESL will be challenging. Given this conundrum, the following definition is proposed.

Generalized Gamification Definition Prototype

> *The incorporation of game-like features/ mechanics into nontraditional environments such as the workplace, social networks and/ or education. Its purpose is to engage/ motivate participants through collaboration and/or competition. As a result, some benefits of gamification may include, increased information retention, increased employee performance, increased student assignment completion rates, customer loyalty etc.*
>
> (Hack, 2024a, p. 6)

Gamification in a Language Learning Context

> *The incorporation of game-like features/mechanics into real or near real live settings as human interaction in the forms of listening, reading, speaking and/ or writing. Its purpose is to engage/motivate ESL learners via collaboration and/or competition. As a result some benefits of gamification may include, increased information retention, increased student participation, increased student assignment completion rates, etc.*
>
> (Hack, 2024a, p. 6)

The definitions listed above are only suggestions. Their creation was a result of amalgamating other perspectives (Camilleri & Neelim, 2024; Kapp (Guest), 2022; Lou, 2021; Secchi, 2023) with a LINC mentality. Though a starting point, this definition will need scrutiny by subject matter experts, volunteers, and shareholders with invested interest within the ESL and EAL community; a discussion needs to be had of what gamification means to the TESL Ontario membership.

To bridge the gap between theoretical concepts and practical application, it is essential to view the LINC curriculum through the lens of an instructional designer. This approach allows us to translate the Canadian Language Benchmarks (CLB) into actionable strategies that enhance language learning. The upcoming section demonstrates how instructional design principles, when paired with game-based activities, can be aligned with both the Can Do Statements Guide and the broader CLB. By examining these benchmarks side-by-side with instructional design perspectives, LINC instructors can craft more engaging and effective learning experiences that cater to diverse learner needs.

The below tables reference specific sections of the Can Do Statement (Centre for Canadian Language Benchmarks, 2013) and the Canadian Language Benchmarks PDF (Government of Canada, 2012). Please refer to them while reading these tables.

| **Can Do Statement Criteria** | **Reflected in Gamification/ADDIE Design Perspective** |
|---|---|
| CLB Level | Language Skill |
| At the Benchmark, I can: | General Outcomes |
| When student best<br><br>show your ability | Conditions (of the game) |
| Language tasks: "kinds of things that learners at this benchmark can usually do"<br><br>- Including general examples | Detailed Outcomes |
| Language production examples (as seen in cartoon speech bubbles) | Game Ideas |
| (From Centre for Canadian Language Benchmarks, 2013, p. 10) | (Hack, 2024a, p. 21) |

Table 2: Comparing 'Can Do Statements' from the Perspectives LINC Instructors and ADDIE Designers Employing Gamification

| **CLB Benchmark Level Criteria** | **Reflected in Gamification/ Instructional Designer's Perspective** |
|---|---|
| Profile of Ability | Outcomes |
| Competency Areas | Language Skill |
| Competency Statements | General Outcomes |
| Features of Communication | Conditions (of the game) |
| Sample Indicators of Ability | Detailed Outcomes |
| Sample Tasks | Game Ideas |
| (From Government of Canada, 2012, p. XIV) | (Hack, 2024a, p. 20) |

Table 3: Comparing the Canadian Language Benchmarks Criteria and ADDIE Designers Employing Gamification.

## Linking ADDIE to LINC

The LINC instructor does not need to be an instructional designer to follow the precepts of ADDIE design using gamification elements. In fact, the current curriculum materials that one uses every day in their LINC classroom reveal remarkable amounts of information that translates nicely into both ADDIE and game design. For those that take preference to the *CLB: Can Do Statements* (Centre for Canadian Language Benchmarks, 2013), the guide provides critical information about how to generate outcome statements and

the conditions that need to be produced in a game setting; these are components of your ADD (analyse, design, and develop) stages. Sometimes one can even draw game idea clues from the cartoon character's discussion bubbles.

For those seeking deeper knowledge, the CLB Curriculum Guide (Government of Canada, 2012) is a treasure trove of important information pertaining to the outcome statements (simplified to detailed), the language skills to assess during the game, conditions for the game setting, and some information that might shed light on game idea clues.

These two documents are critical in building an ADDIE design that is in compliance with PBLA. Regardless of which CLB level one teaches, this method of ferreting out LINC outcome/objective statements will help you use your time more efficiently and boost the quality of your ADDIE/gamification design.

Assuming your students are appropriately placed, this essentially handles the 'Analyse' phase for you. Other institutional materials that are important to consider in the ADDIE model include: learner language needs assessments, learners' language goals, classroom topic selection, classroom materials, methodology, and outcome and objective statements. This is your 'Design' phase. If an instructor seeks to incorporate more materials, ADDIE principles can act as a filter to determine the most critical aspects of the information being collected. ADDIE is also designed for group work, meaning it is okay to ask another instructor for peer review or to help in the creation of the lesson plan.

## Bloom's Taxonomy for gamification and statement formulation

For most LINC instructors, engaging with Bloom's Taxonomy (Fractus Learning, 2023) to create and fine-tune objective and outcome statements is a task we are all too familiar with. This will give us a direction to 'develop' our gamified learning. The quest to find the most powerful verbs to forecast our students' actions for each assessment activity is endless. It is also a quest for many that may feel daunting, particularly when one is required to incorporate these facets with PBLA. Fortunately, authors Kapp et al. (2014) designed a very practical chart that incorporates Bloom and works with games. What is presented below is a modification of the chart, incorporating CLB levels, revised definitions of Bloom's terms in this context and suggested games that fulfill these definitions. These are merely recommendations; ESL/LINC instructors should feel free to use their discretion to determine the adequacy of this chart for their situations.

**Blooms Revised Taxonomy Matched with Game Activties**

| CLB Level | Revised Bloom's Taxonomy | Revised Definitions of Terms | Associated Verbs | Sample Game Activities | Example Games |
|---|---|---|---|---|---|
| CLB 9 - 12 | Creating | Putting elements together to form a coherent or functional whole; reorganizing elements into a new pattern or structure through generating, planning, or producing. | Assemble, Construct, Create, Design, Develop, Formulate, Write, Generate, Plan | Building, building your own world | Minecraft |
| CLB 9 - 12 | Evaluating | Making judgements based on criteria and standards through checking and critiquing. | Appraise, Argue, Defend, Judge, Select, Support, Value, Evaluate, Critiquing, Checking | Strategy | Chess, Stratego, Risk |
| CLB 8 - 12 | Analyzing | Breaking material into constituent parts, determining how the parts relate to one another and to an overall structure or purpose through differentiating, organizing, and attributing. | Compare, Contrast, Differentiate, Discriminate, Distinguish, Examine, Experiment, Question, Organize, Attribute | Allocating Resources | Civilization V, Age of Empires, The Sims, |
| CLB 6 - 8 | Applying | Carrying out or using a procedure through executing or implementing. | Demonstrate, Dramatize, Employ, Illustrate, Operate, Schedule, Sketch, Solve, Use, Execute, Implement | Role Playing | Video-based sports games, Red Dead Redemption |
| CLB 4 - 6 | Understanding | Constructing meaning from oral, written, and graphic messages through interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining. | Classify, Identify, Locate, Recognize, Report, Select, Interpret, Exemplify, Summarize, Infer, Compare, Explain | Puzzle Solving, Exploring | Myst, Clue |
| CLB 1 - 3 | Remembering | Retrieving, recognizing and recalling relevant knowledge from long term memory. | Define, Duplicate, List, Memorize, Recall, Repeat, Recognize | Matching, Collecting | Hangman, Trivial, Pursuit |
| | | | | | Kapp et al., 2014, pp. 44–45 |

Table 4: Adapted Bloom's Revised Taxonomy Matched with CLB levels and Game Activities.

The discussion will start with the second column referred to as Revised Bloom's Taxonomy. This column will likely be very familiar to the ESL/EAL instructor community. The exact same wording is used to describe the lower and higher orders of thinking. Nothing has changed at this point in this model.

The third column, the Revised Definitions of Terms, is where the change in Bloom's Taxonomy begins. Kapp et al. (2014) decided to dive deep into the world of instructional design by changing the definition of each order of thinking verb into game-like definitions.

In the fourth column, the instructors pull verbs that are primarily associated with game-like habits. To help further illustrate this, column five, 'Sample Game Activities', provides examples of types of games one would likely play for each order of thinking. To prove this logic, Kapp et al. (2014) provided actual game examples in the last column of their diagram. This is powerful. It demonstrates examples of games people play daily that have learning potential within a classroom.

These examples highlight how Bloom's Taxonomy, when combined with gamified elements, can bring a new level of engagement and clarity to instructional design. By mapping game-related activities to different cognitive levels, instructors can create more immersive learning experiences that align with specific educational goals. However, to effectively implement this in a LINC classroom, it is crucial to develop clear and measurable outcomes and objective statements that guide both instruction and assessment. This is where the integration of Bloom's verbs and gamification principles becomes essential for crafting statements that are both actionable and relevant to the learners' real-world language needs.

While Kapp et al. (2014) have produced their list of video games that satisfy these learning/Bloom's criteria, there is no reason a LINC instructor could not adapt this and apply it to their learning situations. For example, a CLB level 4 learner would be focused on *understanding* according to Bloom. This would involve recognizing and recalling relevant knowledge from a lesson, perhaps by identifying and comparing. A good puzzle game for this could be the classic board game *Guess Who?*. Players have to identify one unique face by asking simple questions: "Does your person have glasses?" "Do they have a mustache?" "Are they old?". These then map well onto Can Do statements (Centre for Canadian Language Benchmarks, 2013, p. 7) like "Interacting with others: can ask simple questions about appearance" and a CLB 4 Profile of Ability Across Stage 1 Speaking "Communicating information about common everyday activities, experiences, wants and needs" (Government of Canada, 2012, p. 38).

## Outcome statements and objective statements

The last and most difficult part of this exercise is the formulation of outcome and objective statements. Please be aware that this is only one way to craft these statements, and it is intended to help new LINC instructors. Veterans in the profession will likely have alternative methods.

For the outcome statements, consider the following: The outcome statement should be written in present tense. The strong verb selected is associated with the gaming activity. The sample indicators of ability are included with revisions (as needed). Finally, the situational setting being used incorporates elements of the game.

| Outcome Statement Formula | | | | | | |
|---|---|---|---|---|---|---|
| The Learner Can | = | Strong Verb from Bloom's Taxonomy | + | Sample Indicators of Ability X Revisions | + | Situational Setting |
| Example | | | | | | |
| The Learner Can | = | Identify | + | Individual Familiar Words and Short Phrases used in Common Courtesy Formulas | + | When Asked By the Host in a Game Show Setting |

Table 5: Outcome Statement Formula Example (Hack, 2024a, p 26)

When using this formula to make objective statements, observe the following procedures. Formulate the statement in the future tense. Select a strong verb that is associated with the gaming activity, making sure the phrase incorporates the sample indicators of ability, the needs assessment and learners' language goals. Select a measurement that can be tangibly assessed. Ensure the situational setting that is selected incorporates elements of the game.

| Objective Statement Formula | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| The Learner Will Be Able to | = | Strong Verb from Bloom's Taxonomy | + | Same Indicator of Ability X Needs Assessment and Learner's Language Goals | + | Quantity | + | Situational Setting |
| Example | | | | | | | | |
| The Learner Will Be Able to | = | Identify | + | Individual Familiar Words and Short Phrases When Asked Simple Questions About Their Identity | + | In 1 or 2 Short Turns | + | Initiated By the Host |

Table 5: Objective Statement Formula Example (Hack, 2024a, p. 26)

These outcome and objective statement formulations are the culmination of integrating the ADDIE model with gamification principles in LINC instruction. By thoughtfully crafting these statements, instructors can ensure that their lesson plans are not only aligned with PBLA guidelines but also tailored to the diverse needs of their learners. The emphasis on clear, actionable verbs and measurable goals echoes the structure of ADDIE's stages, providing a consistent framework that facilitates both student engagement and meaningful assessment. Additionally, this allows instructors to select/create games that have these objectives as part of their core mechanics—ensuring that objective, outcome and game are aligned.

## Conclusion

As we have seen throughout the article, the integration of gamification within the ADDIE model enhances the learning experience by making it more dynamic and student-centered.

By examining each stage of ADDIE and aligning it with CLB and PBLA principles, we uncovered the potential for creating structured yet flexible games that satisfy learning outcomes.

By thoughtfully integrating game mechanics into lesson planning, LINC instructors can create an engaging, interactive environment that not only meets curriculum goals but also fosters a supportive space for learners to experiment, collaborate, and thrive.

As you embark on your own journey with the Gamified ADDIE model, remember that the process is as adaptable as the learners it serves. The potential for creativity is boundless, and with thoughtful planning, you can craft experiences that are both educational and enjoyable. By combining the structure of ADDIE with the motivational power of gamification, you're not just teaching language skills—you are creating memorable learning experiences that resonate long after the lesson ends.

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