THE LICW METHOD GUIDE

Instructional Philosophy, Curriculum Rationale, and Preservation of the LICW Method

VERSION 1.6

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LICW is committed to ensuring digital accessibility for people with disabilities. We strive to continually improve our curriculum, teaching methods, and training devices to enhance the user experience for all. This document has been optimized for screen readers used by people who are visually impaired.

REVISION HIGHLIGHTS:

Version 1.6 expands and refines this guide to better preserve the instructional reasoning, academic positions, and academic continuity behind the LICW Method.

This revision adds or strengthens guidance on classroom tone, classroom civility and controversial topics, instructor response when discussion becomes disruptive or uncomfortable, live instruction, class privacy, unauthorized recording or transcription, AI note-taking and meeting-summary tools, instructor response to unauthorized session-capture tools, decoders, and the academic evaluation of new instructional tools and ideas.

It also further clarifies LICW's positions on class-level overlap, comfort zone and stretch classes, error and recovery, measurement of progress, on-air readiness, method guardrails, visual and mnemonic character-learning pathways, character speed, character sequencing, Farnsworth spacing, rhythm, straight-key foundation, and preservation of the LICW Method.

The purpose of these revisions is not to restrict thoughtful change, but to help LICW continue improving, welcome useful new instructional ideas, and evaluate proposed changes without drifting away from the principles that support real Morse code proficiency, fluency, and mastery.

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INTRODUCTION

This document preserves the instructional philosophy, curriculum rationale, and academic principles that define the LICW Method.

The Academic Reference Guide describes what LICW teaches and how the curriculum is structured. This document explains why the curriculum is designed that way.

Its purpose is to support academic continuity by documenting the reasoning behind key instructional decisions, particularly those that may not be self-evident over time.

LICW maintains a culture of continual improvement. These sections are not intended to restrict change, but to ensure that change is purposeful, informed, and aligned with sound instructional principles and observed student outcomes.

Future instructors, curriculum developers, and club leaders should use this document as a guide when evaluating new ideas, refining existing practices, and preserving the elements of the LICW Method that support long-term student development.

HOW TO USE THIS GUIDE

This guide is not merely supplemental material. It serves as the institutional record of LICW's teaching approach.

The Academic Reference Guide explains what LICW teaches and how the curriculum is organized. This guide explains why key instructional decisions were made, why certain practices are encouraged or discouraged, and how future instructors, curriculum developers, and club leaders should evaluate proposed changes.

Many of the principles documented here may feel self-evident to current instructors because they have developed through years of classroom experience, observation, and refinement. Over time, however, those assumptions can be lost, diluted, or unintentionally reinterpreted.

For that reason, this guide should be read as guidance for preserving academic continuity. Its purpose is to preserve the reasoning behind the LICW Method so that the club can continue to evolve without drifting away from the principles that make the curriculum effective.

At the same time, this guide is not intended to restrict thoughtful change. LICW maintains a culture of continual improvement. Methods may evolve, tools may change, and new ideas should be explored. What must remain constant is the discipline of evaluating those changes against sound instructional principles and observed student outcomes.

In that sense, this guide is not a constraint. It exists to inform judgment, not replace it, and to ensure that change is purposeful, grounded, and aligned with the long-term development of our students.

HUMAN PERFORMANCE IN MORSE CODE ACQUISITION

INTRODUCTION

Human performance in the acquisition of Morse code varies widely. Some learners progress rapidly to proficiency, while others advance more slowly or experience extended plateaus. These differences are normal and should be expected.

This section reviews what is known about variation in Morse code acquisition, why learners progress at different rates, and what instructional principles can reduce frustration while improving long-term success.

HISTORICAL FOUNDATIONS

Koch (1936): Acoustic Patterns and Character Speed

The most influential historical source for LICW teaching methods is Ludwig Koch's 1936 report. Koch demonstrated that Morse characters should be learned as complete acoustic patterns rather than by visual reference to printed charts. He also found that characters sent below approximately 10 WPM were less likely to be perceived as unified sounds and more likely to be counted analytically. These findings support the sound-first foundation of the LICW approach.

The 5 WPM Legacy

For decades, U.S. amateur licensing required 5 WPM decoding. That requirement encouraged rote memorization and chart-based counting methods that ran counter to Koch's recommendations. Yet many operators still achieved fluency, suggesting that while teaching method matters greatly, aptitude and persistence also play important roles.

Thurstone (1919): Aptitude as a Special Ability

L. L. Thurstone found no meaningful correlation between success in telegraphy and occupation, education, or general intelligence. He concluded that telegraphy depends on a distinct auditory ability rather than on general intellectual attainment.

Lipmann (1928): Early Learning as a Predictor

Otto Lipmann proposed that early learning speed may predict later success. How quickly a student learns the first few characters can provide

an early indication of whether progress is likely to be rapid or whether more time and support will be required.

Koch (1936) and Taylor (1943): Validation of Early Performance
Koch described the first 30-60 minutes of learning - specifically, the acquisition of four to five characters at 12 WPM - as a meaningful proficiency check. Donald Taylor's 1943 Harvard thesis supported this principle, concluding that early learning performance is one of the strongest predictors of long-term proficiency.

U.S. Army (1968): Time to Proficiency
Army data showed that learners reached 12 WPM in an average of 55 hours, but with a spread of approximately 18 to 110 hours. The significance of the finding was not merely the average, but the wide range: all students reached proficiency, but the time required varied substantially.

WHY PERFORMANCE VARIES

Taylor's work suggested that differences in Morse code acquisition are shaped primarily by three factors:

1. **Aptitude** – natural auditory abilities, including rhythm, pitch sensitivity, and tonal memory
2. **Distribution and Quality of Practice** – how practice is spaced, structured, and sustained matters more than long, unfocused effort
3. **Motivation** – persistence, mindset, and confidence that progress is possible influence long-term success

Modern teaching experience continues to support these findings. Aptitude may affect the rate of progress, but the quality of practice and the strength of motivation remain the factors most within the learner's control.

ADDITIONAL PREDICTORS: MUSICAL ABILITY, AGE, AND BILINGUALISM

- **Musical ability:** Historically associated with faster progress because Morse depends heavily on rhythm and tonal pattern recognition.
- **Younger learners:** Often acquire Morse more quickly, likely because of greater neural flexibility.
- **Bilingualism:** Although not emphasized in early telegraphy research, modern cognitive science suggests that bilingual learners may benefit from stronger auditory discrimination, working memory, and

attention control. This should be viewed as a possible advantage, not a guarantee.

THE PATH TO MORSE CODE PROFICIENCY, FLUENCY, AND MASTERY AT LICW

Within the LICW Method, Morse code proficiency, fluency, and mastery do not come from memorizing characters in isolation. They develop through a series of intentional learning steps, beginning with sound-first character recognition, progressing through flow and word discovery, and ultimately extending into more durable, lower-effort communication at higher levels of performance.

1. **Character Recognition (BC1/BC2)** – acquisition of the 44 Morse characters
2. **Short-Word Character Flow (BC2 + Guided Practice/INT Prep)** – movement from isolated characters to short sequences
3. **Flow Skills Development (INT1)** – continuity, rhythm, and error tolerance
4. **Increasing Effective Speed (INT2)** – reduced TTR, stronger IFR, and growing Character Flow Proficiency
5. **Word Building to Word Discovery (INT3)** – increasing ability to perceive words as meaningful units
6. **Fluency (ADV1)** – real-time CW communication under natural operating conditions
7. **Extension to Mastery (ADV2/ADV3)** – deeper fluency under higher speed, increased density, longer duration, and reduced cognitive effort

This progression is central to Project OverLearn and distinguishes the LICW Method from approaches that remain centered on isolated recognition accuracy alone. It also reflects a continuous developmental path from initial proficiency through real-time CW fluency and into mastery-level operation.

MANAGING EXPECTATIONS

Progress in Morse code is not linear. Learners often experience extended plateaus followed by sudden breakthroughs. Without proper framing, students may interpret these plateaus as evidence of failure when they are in fact normal periods of consolidation.

Misaligned expectations increase frustration and contribute to dropout. Clear instructional framing - that progress varies widely and that plateaus are both normal and temporary - helps sustain persistence and reduces discouragement.

STRATEGIES TO MINIMIZE ACQUISITION TIME

- Optimize practice through short, frequent sessions rather than long, fatiguing ones
- Integrate sending and receiving so that recognition and production reinforce one another
- Emphasize flow over perfection, especially through IFR and continuity
- Apply OverLearn principles to reduce TTR and strengthen flow
- Use Bootcamp, where appropriate, as an accelerator rather than as a requirement

LICW POSITION

- Human performance in Morse acquisition varies widely, and that variation is expected.
- Aptitude influences rate of progress, not ultimate possibility of success. With consistent, high-quality practice, all learners can achieve meaningful fluency.
- Curriculum should be designed for different rates of progress. Carousels, Guided Practice, class scheduling that encourages stable peer groups, and OverLearn Bootcamp provide flexible pathways that allow students to progress according to demonstrated proficiency rather than the calendar.
- Instruction should normalize plateaus, emphasize recovery, and focus on process measures such as **TTR**, **IFR**, and **flow**, not speed alone.
- Every student can succeed. The role of instruction is to provide the structure, tools, and encouragement that make success possible.

CONCLUSION

Morse code is not mastered through rote memorization or brute force drilling alone. It is acquired through structured progression guided by sound principles of human learning. Differences in pace are natural and predictable, and with appropriate support, students can continue progressing toward fluency.

Within the LICW Method, OverLearn principles - flow-first learning, process-based progress measures, recovery skills, and sustained guided practice - represent the club's best synthesis of historical research, classroom observation, and practical teaching experience. The purpose of the curriculum is not only to teach Morse code, but to sustain learners with confidence, patience, and purpose as they move toward fluent communication.

OBJECTIVE AND OPERATING FOCUS OF THE LICW CURRICULUM

PURPOSE

This section defines the primary objective of the LICW curriculum and clarifies the type of Morse code skill it is designed to develop. Its purpose is to ensure that curriculum development, instructional decisions, and future changes remain aligned with LICW's central goal: helping students become capable, confident CW operators.

PRIMARY OBJECTIVE

The primary objective of the LICW curriculum is to develop operators who are proficient and fluent in Morse code communication.

This includes the ability to copy and understand Morse code in real time, maintain continuity during imperfect copy, recover from misses without disruption, and communicate effectively on the air.

LICW students may apply these skills in many operating environments, including conversational QSOs, nets, POTA and SOTA, Field Day, contesting, traffic handling, special events, and other forms of CW operation.

The emphasis is on communication, confidence, and real-world capability, not isolated numbers or scores.

RELATIONSHIP TO FLOW-BASED LEARNING

Flow-based learning is specifically aligned with this objective.

It develops continuous engagement with the sound flow, tolerance for incomplete information, real-time processing and recovery, and intuitive recognition of words, callsigns, abbreviations, exchanges, and common operating patterns.

These skills are useful across many forms of CW operation. Whether a student is having a conversational QSO, completing a contest exchange, checking into a net, activating a park, or handling structured traffic, the operator must still hear the code, remain in motion, recover from missed information, and continue communicating.

DISTINCTION AMONG OPERATING STYLES

Morse code supports a wide range of operating activities, each with different demands and priorities.

Conversational operating emphasizes comprehension, continuity, natural exchanges, and the ability to follow meaning over time.

Contesting and high-speed exchange emphasize callsign recognition, efficient exchange, speed, accuracy, and rapid recovery under crowded or noisy conditions.

Traffic handling and formal messaging emphasize accuracy, completeness, structure, and disciplined operating procedure.

Nets, POTA, SOTA, Field Day, and special events may combine elements of all of these, including structured exchange, variable sending styles, changing conditions, and real-time decision-making.

These are all valid and valuable uses of CW.

LICW POSITION

LICW's curriculum provides a foundation for Morse code communication across many operating styles.

The LICW Method emphasizes sound-first learning, flow, continuity, recovery, rhythm, and real-time processing because these skills transfer broadly. They support conversational operating, but they also support contesting, traffic handling, nets, portable operating, Field Day, and other forms of CW activity.

LICW does not require students to pursue one operating path over another. Students may choose the type of CW operating that interests them most. The role of the curriculum is to give them the underlying skills needed to participate confidently and continue developing in the direction they choose.

Some operating activities may require additional practice, conventions, procedures, or specialized experience. That does not place them outside the LICW path. It simply means that the common foundation developed through LICW instruction may later be applied in different ways.

IMPLICATIONS FOR CURRICULUM DESIGN

This objective influences several key LICW decisions.

These include an emphasis on flow and continuity rather than perfect accuracy alone, a focus on meaning and operating patterns rather than isolated characters, the use of continuous input rather than overly segmented drills, the avoidance of training methods that interrupt or fragment the flow of code, and a reduced emphasis on words per minute as the primary measure of progress.

These choices are intentional because they support real-world CW communication across a broad range of operating environments.

CONCLUSION

The LICW curriculum is designed to produce capable, confident operators who can communicate in Morse code under real-world conditions.

Students may use those skills in conversational QSOs, nets, contesting, traffic handling, POTA, SOTA, Field Day, special events, or any other CW activity that interests them.

Future instructors and curriculum leaders should ensure that changes to the program continue to support broad Morse code communication while preserving the LICW Method’s emphasis on sound-first learning, flow, recovery, rhythm, and real-time operating skill.

CURRICULUM DESIGN IN MORSE CODE INSTRUCTION

PURPOSE

This section explains LICW's position on curriculum design in Morse code instruction. It addresses why fixed-length classes, when designed to produce a defined level of proficiency by the end of a course, are generally inconsistent with the way Morse code skill develops. It also explains the rationale for LICW's Beginner Carousel, the ongoing weekly class structure used at the Intermediate and Advanced levels, and the specific role of OverLearn Bootcamp.

BACKGROUND

Morse code is not primarily a knowledge-based subject. It is a perceptual, cognitive, and performance skill. Students are not simply learning facts about code; they are developing sound recognition, rhythm, timing, flow, recovery, and automaticity. These abilities emerge gradually through repeated exposure and sustained practice over time.

Because of this, progress is often uneven. Students may remain at a plateau for a period of time and then experience sudden improvement. Others may need repeated exposure to the same material before it becomes comfortable. This is normal in skill acquisition and should be expected in Morse code learning.

LICW POSITION

LICW's position is that classes intended to develop a higher level of Morse code proficiency should not normally be designed around the expectation that students will reach that level simply because a fixed course period has ended.

The reason is simple: the path to durable proficiency is often longer than the course itself. A fixed-length course can unintentionally create the impression that students should be ready to advance when the calendar says the course is over, rather than when the necessary skills have actually developed.

This can lead students to feel that they have failed, when in fact they are still in the normal process of acquiring a difficult real-time skill.

This does not mean that fixed-duration offerings have no value. They may be useful for orientation, special topics, focused practice, introductions to operating activities, or short-term reinforcement. The concern is using a fixed course calendar as the primary measure of proficiency or readiness.

INSTRUCTIONAL RATIONALE

A defined course length assumes that students will move through the learning process at roughly the same pace. In Morse code instruction, that assumption is usually incorrect. Students differ in recognition speed, comfort with sound patterns, tolerance for missed copy, practice consistency, prior experience, and ability to maintain flow under pressure.

When a fixed course ends, some students may be ready to advance, while others may still need time, repetition, and reinforcement. Advancing students before they are ready can create unnecessary frustration at the next level. Holding all students to the same timetable can also discourage those who are making real progress but not yet at the expected endpoint.

For that reason, LICW's curriculum is designed to support progression without imposing artificial deadlines on proficiency.

APPLICATION IN THE LICW CURRICULUM

The Beginners Carousel reflects this philosophy. It is intentionally repetitive and continuous. Students may enter, remain, repeat, and progress when ready. The structure provides consistency without penalty. Its purpose is not to force completion by a particular date, but to build the foundation needed for further development.

At the Intermediate and Advanced levels, LICW uses an ongoing weekly class model rather than fixed-duration proficiency courses. Students remain engaged with classes that support gradual development over time. This allows instruction to remain purposeful and structured while recognizing that fluency, flow, and confidence develop through continued exposure and practice, not through completion of a fixed course calendar.

This model also preserves continuity across the curriculum. Students can continue working at the appropriate level until the underlying skills are strong enough to support advancement.

THE SPECIFIC ROLE OF BOOTCAMPS

Bootcamps are different from LICW's ongoing weekly class structure, but they serve a specific and important purpose.

Bootcamps are not designed to replace the regular curriculum or to move a student from one level to the next simply because a short course has been completed. Rather, they are designed to address a specific learning and mindset barrier: the student's response to missing.

Many students treat a missed character or word as a failure. That reaction causes hesitation, backward focus, loss of rhythm, and breakdown of flow. Bootcamps are designed to change that response. They teach students that missing is not failure, and that the essential skill is to remain in motion, recover instantly, and protect what comes next.

In that sense, Bootcamps are accelerators of mindset and learning behavior. Their value lies in helping students approach the ongoing curriculum with better habits, greater confidence, and a healthier relationship with imperfection.

CONCLUSION

LICW's curriculum design reflects the reality that Morse code proficiency develops gradually, individually, and through sustained engagement. Fixed-length classes may be useful for presenting information, introducing focused topics, or reinforcing specific skills, but they are poorly suited to serving as the primary path to proficiency in a complex auditory skill.

<u>The goal is not to complete a course. The goal is to develop durable skill.</u>

LICW's Beginner Carousel, ongoing Intermediate and Advanced classes, and OverLearn Bootcamp are all designed around that principle.

CLASS LEVEL OVERLAP AND STUDENT PROGRESSION

PURPOSE

This section explains the intentional overlap between class levels within the LICW curriculum and defines the role of both comfort zone and stretch classes in student development.

Its purpose is to ensure that student progression is understood as a continuous process rather than a sequence of discrete steps, and to reduce the risk of future changes that impose rigid level boundaries or premature advancement expectations.

BACKGROUND

In traditional instructional models, progression is often defined by clearly separated levels with specific entry and exit criteria. Students are expected to complete one level before advancing to the next.

LICW does not follow this model.

Morse code acquisition is not linear. Skill development occurs unevenly, with periods of rapid progress, plateau, and consolidation. For that reason, the LICW curriculum is designed with intentional overlap between levels to support continuous development rather than staged completion.

Without explicit guidance, instructors may unintentionally treat levels as gates rather than ranges, which can lead to unnecessary pressure on students and reduced effectiveness of the program.

LICW POSITION

Class levels within LICW are intentionally overlapping. They represent ranges of development rather than fixed stages that must be completed before moving forward.

Students are not expected to be fully prepared before participating in a higher-level class. Exposure to material that is slightly beyond current ability is an essential part of the learning process.

Progression is therefore not defined by “graduation” from one level to another, but by increasing comfort, continuity, and capability across a range of operating conditions.

COMFORT ZONE AND STRETCH CLASSES

Within this model, students benefit from participating in both comfort zone and stretch classes.

Comfort Zone Classes

These classes operate at or slightly below a student’s current level of ability. They:

- Reinforce continuity and confidence
- Allow skills to stabilize
- Reduce cognitive load
- Support consistent flow

Stretch Classes

These classes operate slightly above a student’s current level of ability. They:

- Introduce controlled difficulty
- Require recovery from misses
- Promote adaptation and growth
- Accelerate the development of flow skills

Both types of classes are necessary.

Excessive reliance on comfort zone classes may lead to stagnation. Excessive reliance on stretch classes may lead to frustration and disengagement. Balanced participation supports the most effective progression.

Over time, a stretch class often becomes the student’s new comfort zone. Material that once felt fast, difficult, or slightly beyond reach gradually becomes familiar through repeated exposure. As that happens, cognitive load decreases, recovery improves, and the student becomes more comfortable operating at that level.

This is one of the ways progression occurs within the LICW model. Students do not move forward simply because they have completed a level. They move forward because repeated exposure to appropriate challenge gradually changes what feels manageable. Yesterday's stretch becomes today's comfort zone, and a new stretch can then begin.

ROLE OF THE INSTRUCTOR

Instructors play an important role in helping students navigate this model.

Instructors should:

- Encourage participation across adjacent levels when appropriate
- Normalize the experience of being "not quite ready"
- Reinforce that missing characters is expected and not a sign of failure
- Guide students toward a balance of comfort and challenge
- Help students recognize when a former stretch class has become a new comfort zone

Instructors should avoid framing progression as a requirement to "move up" only when fully prepared. Such framing can discourage beneficial exposure to higher-level material.

RELATIONSHIP TO FLOW-BASED LEARNING

The overlap between levels directly supports flow-based learning.

Stretch classes create conditions that require:

- Reduced Time to Recognize, or TTR
- Improved Instant Flow Recovery, or IFR
- Increased tolerance for incomplete information

Comfort zone classes allow these skills to stabilize and become more automatic.

Together, they help students remain engaged with the sound flow while developing real-time processing ability. As students repeat this cycle, stretch becomes comfort, comfort becomes stability, and stability creates readiness for the next appropriate challenge.

CONCLUSION

Intentional overlap between class levels is a defining feature of the LICW curriculum. It reflects the non-linear nature of Morse code acquisition and supports continuous development across all stages of learning.

Future instructors and curriculum leaders should preserve this structure and avoid introducing rigid boundaries that would limit exposure, reduce flexibility, or disrupt the balance between confidence and challenge that supports long-term progress.

FLOW-BASED LEARNING AND THE LICW METHOD

PURPOSE

This section defines the LICW instructional model and explains the role of flow-based learning in Morse code acquisition.

BACKGROUND

Morse code proficiency is often described in terms of character recognition. While recognition is necessary, it does not fully describe the skill required for real-world operation. Morse code is received as a continuous stream under real-time conditions. The operator must process that stream without interruption, maintaining continuity even when individual elements are not fully understood.

Traditional approaches to instruction can unintentionally treat Morse code as a sequence of discrete recognition events. This can lead students to focus on identifying each character individually, often with conscious effort, rather than developing the ability to process code as a continuous auditory pattern.

LICW POSITION

LICW's instructional model is based on the development of **continuous auditory processing**, or flow.

Students are not trained to recognize characters in isolation. They are trained to remain engaged with the sound flow as it continues, reducing the time required to recognize characters (Time To Recognize, or TTR), maintaining forward motion, and recovering immediately from missed characters (Instant Flow Recovery, or IFR).

As students progress, this continuous engagement allows for the natural emergence of larger patterns, including words and phrases, without deliberate construction. This process is often described as word discovery.

<u>The objective is not perfect, character-by-character copy. The objective is continuous comprehension under real-time conditions.</u>

INSTRUCTIONAL RATIONALE

Flow-based learning reflects the conditions under which Morse code is actually used. The incoming code does not pause to allow for analysis or correction. The operator must remain with what is being sent and continue forward, regardless of whether individual characters are missed.

Instruction that emphasizes perfect accuracy, isolated recognition, or conscious decoding can interfere with this process. It encourages a stop-and-go approach that is not sustainable as speeds increase.

By contrast, instruction that emphasizes continuity, rhythm, and immediate recovery supports the development of automaticity. Students become less dependent on conscious effort and more capable of processing code in real time.

RELATIONSHIP TO THE LICW CURRICULUM

Flow-based learning is not a separate component of the LICW curriculum. It is the underlying principle that informs all levels of instruction.

At the Beginner level, it guides the emphasis on sound-first learning and early exposure to continuous input. At the Intermediate level, it supports sustained continuity, recovery, and the transition from characters to words. At the Advanced level, it enables confident CW communication under increasingly natural conditions. For those who continue further, it supports the extension of that fluency into mastery under higher speed, greater density, and longer-duration operating conditions.

In all cases, the goal is the same: to develop the ability to remain in motion, recover from misses, and stay engaged with the sound flow.

CONCLUSION

Flow-based learning defines how Morse code is taught at LICW. It aligns instruction with the realities of real-time operation and provides the foundation for all subsequent skill development.

Students who develop the ability to maintain flow, reduce recognition delay, and recover immediately from missed information are equipped to progress toward fluency and mastery.

INSTRUCTIONAL GUIDANCE FOR LICW INSTRUCTORS

INTRODUCTION

LICW does not seek to create a highly structured or rigid teaching environment. LICW's goal is to provide enough consistency that students experience a clear path across class levels, while still allowing each instructor room to tailor instruction to the needs, pace, and personality of the class.

This section provides broad instructional guidance across the training path, with emphasis on class conduct, planning, pacing, feedback, class tone, and the appropriate use of instructional tools.

The purpose is not to make every class identical. The purpose is to ensure that students experience LICW instruction as thoughtful, welcoming, purposeful, and aligned with the LICW Method.

THE INSTRUCTOR'S ROLE

The role of an LICW instructor is to provide students with three essential things: tools, tasks, and motivation.

Tools give students a means to practice. Tasks give them a structure for progress. Motivation helps sustain effort through the frustrations and plateaus that naturally accompany skill development.

Morse code is a skill, not a fact-based subject. Skill development requires repeated, purposeful practice over time. For that reason, effective instruction at LICW is not merely explanatory. It is practical, encouraging, and developmental.

An LICW instructor is responsible for more than presenting material. The instructor creates the conditions under which students can progress: a welcoming atmosphere, a sensible structure, purposeful exercises, and clear feedback that reinforces confidence, continuity, recovery, and forward movement.

Students should leave class feeling that the work was meaningful, that their effort had direction, and that the next step is manageable.

TEACHING ENVIRONMENT AND CLASS TONE

The most effective instructors establish a calm, welcoming, and supportive tone from the beginning of class.

Students should feel that class is a safe place to learn through imperfection. They should not feel pressure to perform for the group, and they should not be called on to repeat or report what they copied in a way that shifts attention from listening and flow toward memorization, self-consciousness, or performance anxiety.

A productive class atmosphere is one in which students can remain engaged, curious, and relaxed enough to continue working even when copy is imperfect.

Instructors should model calm energy, patience, and steady confidence. Errors should be normalized as part of the learning process rather than treated as failures. Praise should be directed more toward recovery, rhythm, participation, and continuity than toward perfect copy.

Over-coaching should be avoided. Silence, repetition, and well-chosen exercises often teach more than constant commentary.

CLASSROOM CIVILITY AND CONTROVERSIAL TOPICS

LICW has members from around the world and across a wide range of political, religious, cultural, and social backgrounds. One of the reasons LICW works is that the club places a high value on acceptance, kindness, patience, respect, and welcome.

LICW academic classes should remain welcoming, respectful, and focused on learning. Students come to class to learn Morse code, build confidence, and enjoy fellowship with others who share an interest in CW. They should not have to navigate political argument, religious debate, divisive social commentary, personal attacks, or conversations that make the class feel uncomfortable or unwelcoming.

This guidance is not intended to police ordinary conversation or remove warmth and friendship from LICW classes. LICW is an adult learning community, with the exception of the Youth Program, and friendly conversation is part of what makes the club enjoyable.

At the same time, instructors and club representatives have a responsibility to protect the learning environment when conversation moves into areas that may divide, pressure, exclude, or make members feel unwelcome.

Instructors should steer class discussion away from topics that are likely to create discomfort, division, or conflict. This includes partisan politics, religious debate, controversial social issues, disparaging comments about groups of people, personal attacks, or any discussion that could reasonably make students feel unwelcome or reluctant to participate.

This is not a judgment on any member's personal beliefs. LICW members hold many different views, and that diversity should be respected. The purpose of this guidance is simply to keep academic classes centered on Morse code learning, fellowship, and mutual respect.

Instructors are empowered to act when conversation moves in a direction that is inconsistent with the LICW learning environment. In many cases, a simple redirection is enough.

Useful instructor language includes:

- "Let's bring this back to Morse code."
- "That is probably a topic best left outside class."
- "We have members from many backgrounds and points of view, so we avoid political and religious discussion in class."
- "I'm going to stop that conversation here so we can keep the class comfortable for everyone."
- "Let's move on."

Instructors do not need to debate the issue, explain all sides, or persuade the person who raised the topic. The goal is not to win an argument. The goal is to protect the class.

If a participant continues after clear redirection, the instructor may respond more firmly. The instructor may end the topic, mute the participant if necessary, move forward with the class, or remove the participant from the Zoom session if the behavior continues or is disruptive.

Instructors should not hesitate to remove an uncooperative participant when necessary to protect the class. If removal is required, the instructor should report the incident to appropriate LICW leadership after class.

Instructors who host classes should know how to claim host or co-host authority and use basic Zoom controls when needed.

This guidance applies to spoken comments, Zoom chat, shared screens, class materials, and any other form of class participation. A comment does not have to be intentionally hostile to be inappropriate for class. If it is likely to make others uncomfortable, create division, or distract from the learning environment, the instructor may redirect or stop it.

LICW trusts its instructors to use good judgment. Not every awkward comment requires formal action, and not every off-topic remark is a problem. Instructors should consider tone, context, intent, and the effect on the class.

At the same time, instructors should not allow a desire to be polite to prevent them from acting when action is needed. A calm, clear redirection is often the kindest response because it protects everyone in the room, including the person who may have unintentionally crossed a line.

GENERAL CONDUCT OF CLASS

Across levels, class structure should support rhythm, focus, and active practice.

A session should begin with a clear sense of purpose and a short opening that establishes tone and direction. Instructors should make clear what kind of skill or progression the class is intended to strengthen, but should avoid lengthy explanation at the expense of practice.

Students develop through guided experience more than through lecture. A short warm-up or review is often useful to reestablish comfort and recall before progressing into more realistic or challenging work.

Throughout class, brief reflective check-ins may be helpful. Asking students what is working, what is difficult, or how they respond when flow breaks can build self-awareness and normalize the learning process.

These check-ins should remain short and practical. Class should remain centered on active participation, not discussion for its own sake.

Class should ordinarily close on a constructive note, with a short takeaway, a brief closing exercise, or both.

PLANNING INSTRUCTIONAL ACTIVITIES

Lesson planning at LICW follows a deliberate progression from structure toward flexibility.

Early levels require more uniformity so that new students receive a consistent foundation in rhythm, timing, and character familiarity. As students advance, the amount of prescribed structure decreases and instructor judgment becomes increasingly important.

The intent is not uniformity for its own sake, but purposeful design. Each class should have a clear reason for what it is doing, while still allowing instructors to adapt to the needs of the group in front of them.

BC1 and BC2 are largely pre-set and should remain consistent. BC Guided Practice / Intermediate Prep introduces more flexibility while still serving a clear bridging function. INT1 continues that bridge, adding instructor discretion within a recognizable structure.

INT2, INT3, and ADV1 follow standard outlines rather than fixed scripts, allowing instructors to adapt drills, speeds, and emphasis while preserving continuity in purpose.

At the upper end, ADV2 and ADV3 are intentionally open-ended. These levels give instructors broad room to design sessions that develop CW fluency, head copy, rhythm-driven comprehension, and advanced natural operating skills.

At those levels, instructor creativity and personality are assets, not problems, provided the work remains aligned with the LICW Method.

LEVEL-SPECIFIC INSTRUCTIONAL GUIDANCE

In BC1, the instructional emphasis is on helping students hear and associate CW acoustic patterns with their corresponding characters.

In BC2, the emphasis remains foundational but expands toward productive practice habits and the beginnings of short-word character flow. These levels rely on structure and consistency, and instructors should avoid unnecessary variation that could confuse early learners.

In BC3, the instructional emphasis shifts from foundational character and short-word development toward early real-world application and on-air

readiness. While BC3 still relies on structure and consistency, it should begin to feel more outward-facing, helping students connect the skills developed in BC1 and BC2 to practical operating situations.

Instruction should reinforce productive receiving habits, continued short-word flow, and growing comfort with common QSO elements, while introducing students to the rhythm, expectations, and vocabulary of basic on-air communication.

BC3 should build confidence, reduce apprehension, and help students see that real operating is a natural next step in their development, while leaving each student free to decide when they are ready to make that first contact.

BC Guided Practice / Intermediate Prep serves as a bridge from BC2 into Intermediate. It is held immediately after BC2, and both BC1 and BC2 students are encouraged to attend.

The first half of class should reinforce the day's Beginner Carousel lesson through structured repetition that strengthens sound familiarity and character recognition. The second half should move toward Intermediate Preparation through multi-character flow work, typically in the 2- to 4-letter range, with emphasis on sustaining rhythm, expanding comfort, and preparing students for the structure and pace of INT1.

During the final six lessons of BC2, attendance at BC Guided Practice / Intermediate Prep shifts from a recommendation to an expectation, with at least one session per week expected during that phase.

INT1 remains transitional in character. It should strengthen rhythm retention, early flow, and confidence with short words and sequences while moving students away from predictable Beginner Carousel patterns and toward a more dynamic learning environment.

Class should typically begin with multi-character flow work in the 4- to 8-letter range, as a more challenging continuation of Intermediate Prep, and then move into more realistic code practice that encourages spontaneous listening and mental recovery.

Instruction at this level should remain focused on active practice, early on-air communication exposure, developing well-paced head sending, and helping students move beyond scripted QSO patterns.

In INT2, INT3, and ADV1, instruction should become progressively less scripted and more adaptive. INT2 focuses on increasing effective speed and strengthening word-building ability. INT3 focuses on continued gains in effective speed and on developing a high degree of continuity through longer sequences. ADV1 focuses on comprehension and CW fluency at natural operating speeds.

Across all three levels, instruction should emphasize purposeful guided practice, concise setup, and flexibility in drills and pacing. These levels benefit from standard outlines, but not rigid scripts.

In ADV2 and ADV3, the instructional environment should be more open-ended. Students at these levels are refining CW fluency under increasingly natural conditions.

Instructors may design sessions around head copy, natural comprehension, rhythm-driven copy, higher-speed operating practice, or other advanced practice formats that are appropriate to the students present.

The essential requirement is that sessions remain purposeful and coherent, even when they are less formally structured.

COMMUNICATION AND FEEDBACK

Feedback is most effective when it is brief, specific, and directed toward process rather than error-counting.

After practice segments, instructors should help students notice what is changing in their experience: smoother recognition, better continuity, quicker recovery, less tension, greater confidence, or stronger rhythm.

Feedback should reinforce the idea that genuine progress is often subtle and is not measured only by what was or was not copied perfectly.

Students may be encouraged to keep brief practice notes between classes so they can become more aware of their own development over time.

Consistency in communication among instructors also matters. Lead Instructors and adjacent-level instructors should remain in regular contact so that students experience continuity in philosophy, terminology, and expectations as they move through the curriculum.

Even where instructors differ in style, the student experience should still feel recognizably LICW.

INSTRUCTOR SELF-CHECK

After each class, instructors should take a moment to reflect on whether the session accomplished its purpose.

Useful questions include:

- Did the activities have a clear instructional aim?
- Did I protect the atmosphere of calm focus and curiosity?
- Did I avoid over-explaining?
- Did students have enough time for active practice?
- Did I keep the class welcoming and respectful?
- Did students leave with a sense of progress and a manageable next step?

Reflection of this kind helps maintain instructional quality without turning class into a formula.

The strongest instructors are not necessarily those who cover the most content, but those who create the best conditions for continued growth.

CONDUCT OF BRIEFINGS

Where briefings are used, they should be truly brief.

Their purpose is not to lecture, but to orient students: to connect the exercise they are about to do with a broader instructional purpose and to establish direction and tone.

Briefings should use clear, conversational language and should last only a few minutes. Once the point has been set, class should move promptly into active practice.

When students are already well oriented and would benefit more from practice time, instructors may appropriately omit the briefing altogether. This is a matter of instructional judgment.

USE OF THE MORSE PRACTICE PAGE AND WORD LIST TRAINER

The Morse Practice Page (MPP) and Word List Trainer (WLT) are valuable tools when used deliberately and in the right context.

In the Beginner Carousel, MPP is especially useful because it provides precise, standardized code generation and helps ensure that new students hear consistent sound patterns during the earliest stage of learning. Its accuracy and uniform pacing reduce distractions and support the formation of correct sound associations.

Beginning in BC Guided Practice / Intermediate Prep and continuing through Intermediate and Advanced instruction, however, routine use of MPP in class should generally be avoided unless it serves a specific instructional purpose.

At those stages, students need increasing exposure to natural, variable human sending. Overreliance on idealized, machine-perfect code can reinforce rigid listening habits and slow adaptation to real-world rhythm and imperfection.

Instructors should therefore rely primarily on live sending and interactive drills that require students to stay engaged with non-uniform code.

Limited demonstrations of MPP or WLT may still be appropriate when a specific instructional goal is being served, especially when helping students learn how to use those tools effectively for independent practice.

CLOSING PERSPECTIVE

This instructional guidance is meant to support consistency without rigidity. It is intended to preserve a coherent LICW experience across levels while respecting the reality that good instruction requires judgment, adaptation, and individual teaching style.

Instructors should use these principles as guidance, not as a script.

The aim is not to create identical classes. The aim is to ensure that, across the curriculum, students experience thoughtful structure, clear purpose, active practice, supportive feedback, respectful class leadership, and a natural progression from one stage of learning to the next.

THE ROLE OF ERROR, MISSING, AND IMPERFECTION

PURPOSE

This section defines LICW's position on error, missing, and imperfection in Morse code learning and explains their role in the development of proficiency.

BACKGROUND

Students commonly interpret missed characters or words as failure. This reaction is understandable, but it is inconsistent with the nature of Morse code as a real-time skill. Unlike written or recorded material that can be reviewed or corrected, Morse code is received as a continuous stream. The incoming code does not pause to allow the operator to resolve uncertainty.

As a result, the ability to continue through imperfect copy is not incidental. It is fundamental to effective operation.

LICW POSITION

LICW's position is that missing is expected and unavoidable. It is not a sign of failure. It is part of the normal learning process and remains present even at advanced levels of operation.

Students are not trained to achieve perfect copy. They are trained to maintain continuity, remain engaged with the incoming code, and prioritize what comes next over what was missed.

<u>The critical skill is not avoiding error. The critical skill is continuing without disruption.</u>

INSTRUCTIONAL RATIONALE

When a student treats a missed character as a problem to be solved before proceeding, several things occur. Attention shifts backward, rhythm is lost, and subsequent characters are missed. This creates a cascade effect in which a single miss leads to multiple losses of continuity.

This pattern is not a reflection of inability. It is a reflection of how attention is being applied.

Effective operators adopt a different approach. When a character or word is missed, they allow it to pass and immediately re-engage with the next incoming information. Over time, this ability to recover quickly becomes automatic.

Instruction must reinforce this behavior. Students should be encouraged to remain relaxed, accept imperfection, and stay in motion. Accuracy will improve as recognition becomes more automatic, but continuity must be preserved from the beginning.

RELATIONSHIP TO FLOW-BASED LEARNING

The acceptance of error is directly connected to flow-based learning. Flow depends on uninterrupted engagement with the incoming code. Attempts to achieve perfect copy disrupt that engagement and prevent the development of continuous processing.

By contrast, accepting occasional loss allows the student to maintain rhythm and continuity. This, in turn, supports the reduction of Time To Recognize (TTR), improves overall comprehension, and enables the emergence of larger patterns such as words and phrases.

In this sense, the ability to continue through imperfection is not separate from flow. It is one of the conditions that makes flow possible.

IMPLICATIONS FOR INSTRUCTION

Instructors should avoid reinforcing the idea that correct copy of every character is the objective. Exercises should be structured in a way that encourages forward motion and immediate recovery rather than correction of past errors.

Students who struggle should not be encouraged to slow down indefinitely in pursuit of perfection. Instead, they should be guided toward maintaining continuity at a level that challenges them while still allowing them to remain engaged.

This may require reassurance, repetition, and consistent messaging that missing is expected and acceptable.

CONCLUSION

Error, missing, and imperfection are inherent in Morse code learning and operation. The development of proficiency depends not on eliminating these elements, but on learning to operate effectively in their presence.

Students who learn to remain in motion, recover immediately, and prioritize continuity are better prepared to progress toward fluency and real-world competence.

THE ROLE OF REPETITION AND TIME IN SKILL DEVELOPMENT

PURPOSE

This section explains the role of repetition and time in Morse code acquisition and clarifies their importance in the development of proficiency.

BACKGROUND

Students often expect progress to occur in a steady and predictable manner. When improvement is not immediately visible, repetition may be interpreted as a lack of progress rather than as part of the learning process.

This expectation is inconsistent with the nature of Morse code as a perceptual and cognitive skill. Development occurs gradually through repeated exposure, and progress is often not apparent in the short term.

LICW POSITION

LICW's position is that repetition is essential to skill development and that proficiency in Morse code requires sustained engagement over time.

Repetition is not redundancy. It is the process by which:

- Sound patterns become familiar
- Recognition becomes more automatic
- Processing speed increases
- Confidence develops

Sustained engagement, rather than completion of a defined sequence of material, is the primary driver of progress.

INSTRUCTIONAL RATIONALE

Each exposure to Morse code reinforces sound patterns and strengthens the learning pathways involved in recognition and understanding. Even when a student notices little or no immediate improvement, learning is still taking place.

Progress often appears uneven. Students may experience periods in which performance seems to plateau, followed by noticeable improvement.

This pattern reflects the underlying process of consolidation rather than a failure to progress.

Repetition also supports the transition from conscious effort to automatic processing. Skills that initially require attention and effort gradually become more fluid and require less conscious control. This transition cannot be accelerated beyond certain limits and depends on sufficient exposure over time.

RELATIONSHIP TO THE LICW CURRICULUM

The structure of the LICW curriculum reflects the importance of repetition and time.

The Beginner Carousel allows students to encounter foundational material repeatedly without penalty, reinforcing sound familiarity and recognition. At the Intermediate and Advanced levels, ongoing weekly classes provide continued exposure and practice under increasingly natural conditions.

Students are expected to remain engaged with the material over extended periods, returning to similar patterns and exercises as their skills develop.

IMPLICATIONS FOR STUDENTS AND INSTRUCTORS

Students should not interpret repetition as a sign that they are not progressing. Repetition is the process through which progress occurs.

Instructors should reinforce this understanding and avoid creating pressure to move forward before the underlying skills are stable. Advancement should reflect readiness, not completion of a sequence.

CONCLUSION

Repetition and time are fundamental to Morse code acquisition. Proficiency develops through sustained exposure, gradual reinforcement, and continued engagement.

Students who remain consistent in their participation and allow the process to unfold over time are best positioned to achieve durable and reliable skill.

MEASUREMENT AND PROGRESS IN MORSE CODE LEARNING

PURPOSE

This section defines how progress should be understood and evaluated in Morse code learning and clarifies the limitations of commonly used measures.

BACKGROUND

Progress in Morse code is often described in terms of words per minute (WPM) and copy accuracy. While these measures are useful in a limited sense, they do not fully capture the development of real-world operating ability.

An exclusive focus on speed or accuracy can lead to misunderstandings about what constitutes meaningful progress and can encourage practices that are inconsistent with the development of continuous auditory processing.

LICW POSITION

LICW's position is that progress in Morse code learning should be evaluated based on the development of **continuous comprehension under real-time conditions**, rather than on speed or accuracy alone.

Words per minute is a descriptive measure of operating conditions, not a complete measure of proficiency. Similarly, high accuracy in controlled conditions does not necessarily indicate the ability to operate effectively in real time.

Meaningful progress is reflected in the development of:

- Reduced Time To Recognize (TTR)
- Sustained continuity during copy
- Immediate recovery after missed characters
- Increasing comfort with natural timing and rhythm
- Emergence of word- and phrase-level recognition

INSTRUCTIONAL RATIONALE

Speed and accuracy can be influenced by conditions that do not reflect real operation, such as extended spacing, short or predictable material, or repeated exposure to the same content. These conditions may produce the appearance of progress without corresponding gains in functional capability.

By contrast, the ability to remain engaged with a continuous stream, tolerate imperfection, and maintain forward motion under natural timing conditions reflects genuine skill development.

Progress in these areas is often gradual and may not be immediately visible. Students may experience periods in which their measured speed appears unchanged while underlying processing improves. Over time, these improvements support increased fluency and operating capability.

RELATIONSHIP TO THE LICW CURRICULUM

The LICW curriculum is structured to support the development of the underlying skills that define real progress.

At the Beginner level, progress is reflected in increasing familiarity with sound patterns and the ability to remain engaged with short sequences.
At the Intermediate level, progress is reflected in sustained continuity, improved recovery, and the emergence of word-level comprehension.
At the Advanced level, progress is reflected in real-time CW fluency and the ability to operate comfortably under natural conditions.

At all levels, progress is tied to the development of flow rather than to the achievement of specific numerical targets.

IMPLICATIONS FOR STUDENTS AND INSTRUCTORS

Students should avoid focusing exclusively on speed or accuracy as indicators of success. These measures can be useful for context, but they should not be treated as the primary objective.

Instructors should reinforce the broader definition of progress and avoid creating pressure to reach specific speeds within defined timeframes. Evaluation should be based on observable improvements in continuity, recognition, and recovery.

CONCLUSION

Measurement in Morse code learning should reflect the development of real-world capability. Speed and accuracy alone do not define proficiency.

Students who develop the ability to maintain continuity, reduce recognition delay, and recover effectively from missed information are making meaningful progress, regardless of the specific speed at which they are operating.

ON-AIR READINESS AND THE ROLE OF OPERATING

PURPOSE

This section defines LICW's position on on-air readiness and explains the role of operating in the development of Morse code proficiency and confidence.

BACKGROUND

Many students view on-air operation as a milestone that occurs after training is complete. This perspective separates learning from operating and often leads students to delay their first contact until they believe they are sufficiently proficient.

This separation is inconsistent with the nature of Morse code as a real-time communication skill. Proficiency develops through exposure to actual operating conditions, not in isolation from them.

LICW POSITION

LICW's position is that on-air operation is part of the learning process and should be approached as a natural extension of instruction rather than as a final objective.

Students are considered ready to begin on-air activity when they can:

- Maintain basic continuity
- Tolerate imperfect copy
- Recover from missed characters and words

Perfect accuracy is not a prerequisite for operating. The ability to remain engaged and continue through imperfect conditions is the relevant threshold.

Students may apply these skills in many forms of CW activity, including conversational QSOs, nets, POTA, SOTA, Field Day, contesting, traffic handling, special events, and other operating environments.

INSTRUCTIONAL RATIONALE

On-air operation introduces elements that cannot be fully replicated in a controlled instructional setting. These include:

- Variability in sending style
- Differences in speed and rhythm
- Environmental conditions such as noise and fading
- The structure and pacing of real communication
- The pressure and satisfaction of communicating with another operator in real time

Exposure to these conditions reinforces the skills developed in instruction, particularly continuity, recovery, rhythm, confidence, and the ability to keep moving when copy is imperfect.

Delaying on-air experience can slow development by limiting exposure to these conditions. Conversely, forcing students onto the air before they are prepared to maintain basic continuity can increase anxiety and reduce confidence.

For this reason, on-air readiness is guided, but not prescribed. Students should be encouraged to begin operating when they feel capable of remaining engaged with the incoming code, even if their copy is incomplete.

RELATIONSHIP TO THE LICW CURRICULUM

On-air activity is aligned with the LICW curriculum and is supported through recommended operating environments that reinforce instructional objectives.

At the Beginner and early Intermediate levels, activities that emphasize structured exchanges and supportive operators provide an appropriate entry point. At the Intermediate and Advanced levels, operating supports the development of real-time CW communication and the application of flow-based skills under natural conditions.

Different operating activities may emphasize different skills. A casual QSO, a net check-in, a POTA exchange, a Field Day contact, a contest exchange, and formal traffic handling do not all require the same operating habits. However, they all benefit from the same foundation: sound-first recognition, continuity, recovery, rhythm, and confidence under real conditions.

<u>In all cases, the purpose of operating is not to demonstrate proficiency, but to develop it.</u>

IMPLICATIONS FOR STUDENTS AND INSTRUCTORS

Students should view on-air activity as part of their learning process rather than as a test of readiness. Early experiences should be approached with the expectation of imperfection and used to build familiarity and confidence.

Instructors should encourage on-air participation without imposing rigid requirements or timelines. Guidance should focus on helping students recognize when they are capable of maintaining continuity and managing the demands of real-time communication.

Instructors should also recognize that students may be drawn to different types of operating. The role of instruction is not to direct every student toward the same operating destination, but to help each student develop the underlying CW skills needed to participate confidently in the activities that interest them.

CONCLUSION

On-air operation is an integral component of Morse code learning. It provides the conditions under which instructional skills are applied, reinforced, and refined.

Students who engage in operating as part of their learning process are better prepared to develop confidence, continuity, recovery, and real-world proficiency.

LICW's goal is to help students become capable CW operators who can use Morse code meaningfully on the air, whether through conversational QSOs, nets, portable operating, contesting, traffic handling, Field Day, special events, or any other CW activity that interests them.

CORE INSTRUCTIONAL PRINCIPLES AND METHOD GUARDRAILS

PURPOSE

This section defines the core instructional principles and method guardrails that help preserve consistency across LICW instruction. Its purpose is to provide clear guidance on practices that do not align with the LICW Method and to reduce the risk of instructional drift over time.

BACKGROUND

In a large instructional environment with many instructors, variation in teaching style is both natural and appropriate. However, variation in method can lead to inconsistent student experiences and may undermine the effectiveness of the curriculum.

Instructional drift often occurs gradually and with good intentions. Instructors may reintroduce familiar techniques, respond to student frustration by modifying pacing or method, or emphasize practices that appear helpful in the short term but are inconsistent with long-term skill development.

For this reason, it is important to define not only what LICW does, but also what it does not do.

LICW POSITION

LICW's instructional model is based on sound-first learning, flow-based development, and continuous auditory processing. Instruction must remain aligned with this model.

The following practices are inconsistent with LICW teaching methods and should be avoided:

- Teaching Morse code as dots and dashes rather than as complete sound patterns
- Encouraging visual charts, written dot/dash notation, code trees, visual associations, mnemonic phrases, or other memory devices as a pathway for learning Morse characters
- Using pictures, phrases, verbal tricks, or other mnemonics to associate characters with dot/dash patterns

- Overusing enhanced spacing or excessively slowed code in ways that alter natural rhythm, timing, and flow
- Emphasizing perfect accuracy at the expense of continuity, recovery, and forward motion
- Treating words per minute as the primary measure of progress rather than TTR, flow, recovery, and comprehension
- Using rigid, script-driven instruction at levels where adaptability, conversational practice, and student responsiveness are required
- Relying on decoders, transcripts, visible text, or real-time correction tools in ways that replace listening rather than develop auditory processing
- Pausing, replaying, or dissecting code so frequently that students learn to analyze missed material instead of staying with the stream

These practices shift the task away from real-time auditory processing and can interfere with the development of rhythm, continuity, recovery, and flow. Over time, they may delay progress toward true proficiency.

NO VISUAL OR MNEMONIC CHARACTER-LEARNING PATHWAY

The LICW Method teaches Morse code as sound. Students are not taught to learn characters through visual dot/dash patterns, printed code charts, code trees, visual associations, or mnemonic devices.

No visual system is used as the method for learning, recognizing, or decoding Morse characters. While ordinary written letters may appear as labels, answers, prompts, or reference points in instructional materials, they are not used as the pathway by which Morse characters are learned. The written letter identifies the meaning of the sound; it does not replace the sound as the object of learning.

LICW does not use mnemonics, memory phrases, pictures, or verbal tricks to associate characters with dot/dash patterns. These approaches may appear helpful in the earliest stage of learning, but they add an extra translation step between the sound and the meaning. That translation step increases Time To Recognize, encourages analytical decoding, and interferes with the development of direct auditory recognition.

<u>The intended learning path is sound to recognition to meaning.
It is not sound to visual pattern to mnemonic to letter.</u>

The goal is direct auditory recognition. Students should learn to hear the Morse character as a complete sound pattern and associate that sound

directly with meaning, without relying on an intermediate visual, verbal, or mnemonic conversion process.

INSTRUCTIONAL RATIONALE

The LICW model depends on consistency. Students progress most effectively when instruction reinforces the same underlying principles across all classes and instructors.

When methods diverge, students may receive conflicting messages about how to approach the code. This can lead to confusion, reduced confidence, and the adoption of inefficient habits that must later be unlearned.

Visual and mnemonic methods are especially problematic because they may produce short-term recognition while slowing the development of true auditory processing. A student may appear to "know" a character, but if recognition depends on mentally recalling a chart, picture, phrase, or dot/dash sequence, the student has not yet developed the direct sound-to-meaning pathway required for flow.

These guardrails are not intended to limit instructor judgment. They are intended to ensure that instructor judgment is exercised within a set of principles that supports the long-term objectives of the program.

ROLE OF INSTRUCTOR JUDGMENT

Within these guardrails, instructors are encouraged to apply their judgment, adapt to the needs of their students, and bring their own experience and style to their teaching.

Instruction should remain:

- Responsive to student needs
- Flexible in pacing and examples
- Consistent in underlying principles

<u>The goal is not uniformity of delivery, but consistency of method.</u>

RELATIONSHIP TO THE LICW CURRICULUM

These guardrails apply across all levels of instruction. They ensure that students encounter a coherent approach as they move through the curriculum, from Beginner through Advanced levels.

They also support the integration of other instructional elements, including flow-based learning, repetition, and on-air activity, by maintaining alignment across all components of the program.

CONCLUSION

Core instructional principles and method guardrails are essential to preserving the integrity of the LICW instructional model. They protect against unintended drift, support consistency across the curriculum, and ensure that students receive instruction aligned with the principles that lead to real-world proficiency.

Within these guardrails, instructors are encouraged to teach with clarity, flexibility, and confidence, while maintaining alignment with the LICW Method.

CHARACTER SPEED IN MORSE CODE INSTRUCTION

PURPOSE

This section explains the role of character speed in Morse code instruction and why LICW treats character speed as a foundational academic decision. It also explains the relationship between LICW's use of 12 WPM character speed in the Beginners Carousel and Ludwig Koch's findings on acoustic pattern formation.

BACKGROUND

Students and instructors often assume that the most helpful response to difficulty is to adjust speed. Some students ask for slower character speeds because slower code feels easier and gives them more time to think. Others ask for faster character speeds because they have encountered training systems that begin at higher character speeds with extended Farnsworth spacing.

Both instincts are understandable, but neither should control instruction by itself.

Morse code learning is not simply a matter of making the code easier or harder. The central task is to help the student hear each character as a complete acoustic pattern. If characters are too slow, they break apart into dots and dashes. If characters are too fast, they may pass before the student can form a usable sound image. In either case, the instructional goal is missed.

Character speed is therefore not a matter of preference. It directly affects how the brain perceives and encodes Morse code.

HISTORICAL FOUNDATION: KOCH'S FINDINGS

Ludwig Koch's 1936 study provides the clearest historical foundation for LICW's position on character speed. Koch examined how Morse code is perceived at different speeds and concluded that the acoustic character of Morse code changes when it is sent too slowly.

Koch found that, below approximately 50 characters per minute, Morse characters lose their **Gestalt**, or whole-pattern, quality. In other words, the

character no longer presents itself to the ear as a single acoustic unit. Instead, the sound begins to break apart into separate elements.

Using the standard conversion of **5 characters per word (PARIS)**, Koch's speed references may be understood as follows:

- 30 characters per minute = 6 WPM
- 50 characters per minute = 10 WPM
- 60 characters per minute = 12 WPM
- 80 characters per minute = 16 WPM
- 100 characters per minute = 20 WPM
- 125 characters per minute = 25 WPM

Koch's important threshold was approximately **50 characters per minute**, or **10 WPM**. Below that level, the character is no longer reliably heard as a whole sound. Above that level, the character begins to retain the acoustic unity needed for sound-first learning.

Koch therefore chose **60 characters per minute**, or approximately **12 WPM**, as the initial learning speed. This was not arbitrary. It was fast enough to preserve the sound image of the character, but not so fast that the average student would be overwhelmed.

Koch also considered higher speeds, including **100 characters per minute**, or approximately **20 WPM**. While that speed more closely approached practical operating goals, it imposed too much cognitive demand on many beginners. Students with a high degree of aptitude could keep up, but many could not. Koch therefore rejected 20 WPM as the general starting point for initial learning and selected 12 WPM as the better instructional compromise.

This is the essential historical basis for LICW's use of 12 WPM character speed in the Beginners Carousel.

LICW POSITION

LICW teaches Morse code as sound. For that reason, character speed must remain high enough for students to hear characters as complete acoustic patterns, but not so high that most beginners are prevented from forming those patterns in the first place.

LICW's position is that character speed should be selected to support sound-pattern formation, not simply in response to student preference, imitation of another training approach, or the appearance of difficulty.

In practical terms, LICW follows Koch's reasoning by beginning the Beginners Carousel at **12 WPM character speed**.

This speed is fast enough to prevent the character from falling apart into dots and dashes, while still being manageable for most beginners. It supports the formation of a direct relationship between the sound image and the character, which is the foundation of later flow, word discovery, and real-time CW communication.

Accordingly:

Character speed should not be reduced merely to make recognition feel easier, nor increased merely to make element-counting impossible.

The goal is not to make code artificially easy or artificially difficult. The goal is to create the best conditions for durable sound-first learning.

THE MISUNDERSTANDING OF "TOO FAST TO COUNT"

A common argument for very high character speed is that students should be forced to stop counting dits and dahs. The intention is sound, but the formulation is incomplete.

The objective is not merely to prevent counting. The objective is to help the student perceive Morse characters as meaningful acoustic wholes.

If character speed is increased beyond the learner's ability to form a stable sound image, the student may indeed stop counting. But the student may also stop perceiving. The characters may become brief, indistinct events rather than recognizable sound patterns. That is not learning. It is overload.

The problem with counting is not that students perceive Morse elements. The problem is that they rely on conscious analytical reconstruction as the primary path to meaning. Proper instruction should move students away from analysis and toward direct sound recognition, but it should not do so by making the sound inaccessible.

For this reason, LICW does not treat higher character speed as inherently superior. A higher character speed may be appropriate later, as recognition strengthens and the student's Time To Recognize decreases. But in initial learning, excessive speed can be counterproductive and self-defeating.

RELATIONSHIP OF CHARACTER SPEED TO FARNSWORTH SPACING

Character speed and Farnsworth spacing are related but distinct.

Character speed determines the shape of the character itself. Farnsworth spacing changes the amount of time between characters or words.

Koch's concern was that, at very slow speeds, the character itself loses its acoustic unity. This is the danger LICW seeks to avoid by preserving adequate character speed.

Farnsworth spacing may be used cautiously to reduce cognitive load while maintaining proper character formation. However, excessive spacing introduces its own problems by altering rhythm and weakening flow. For that reason, LICW treats both character speed and spacing as academically important.

The guiding principle is this:

Preserve the acoustic shape of the character while gradually developing the student's ability to remain in flow.

Character speed protects the sound image. Spacing must be managed so that it does not become a substitute for flow. The next section addresses Farnsworth spacing in greater detail, including its instructional value, its risks when overused, and LICW's position on its limited use.

INSTRUCTIONAL RATIONALE

The LICW Method depends on sound-first learning. Students must learn to hear each character as a complete acoustic unit rather than as a sequence of dots and dashes.

When character speed is too slow, students are encouraged, often unintentionally, to count elements, visualize charts, or reconstruct the character analytically. These habits may produce early success, but they become obstacles as the student attempts to increase speed.

When character speed is too fast, students may be unable to form a stable association between the sound image and the character. They may experience confusion, fatigue, frustration, and avoidance. In that case, the training may appear rigorous, but it is not necessarily productive.

The long-term consequences of inappropriate character speed include:

- Dot/dash counting
- Visual reconstruction
- Increased Time To Recognize
- Difficulty moving into flow
- Resistance to higher speeds
- Dependence on conscious decoding
- Fatigue and frustration
- Delayed development of word discovery and head copy

By contrast, appropriate character speed requires the student to begin forming the correct habit from the start: hearing the sound and associating it directly with meaning.

This is why the difficulty of 12 WPM character speed is not a defect in the method. It is part of the method. At the same time, LICW's use of 12 WPM character speed with limited Farnsworth spacing reflects restraint. It preserves sound-pattern formation while giving students enough room to begin recognizing what they hear without being overwhelmed.

INSTRUCTOR GUIDANCE

Instructors should expect some students to ask for slower character speeds and others to ask for faster character speeds. Both requests should be handled kindly, but the academic principle should remain clear.

The goal is not to make every character immediately easy, nor is it to make recognition artificially difficult. The goal is to help the student develop the correct auditory habit.

Useful instructor language includes:

- “We keep the character speed here so your brain hears the whole sound.”
- “If we slow the character too much, it starts to become dots and dashes instead of a sound pattern.”
- “If we make the character too fast too soon, you may stop counting, but you may also stop hearing the character clearly.”
- “The goal is not just to prevent counting. The goal is to hear a stable sound pattern.”
- “You do not need perfect copy right now. You need repeated exposure to the correct sound.”
- “Missing is expected. Stay with the stream and let the sound become familiar.”

Instructors should not reduce character speed as a routine accommodation for recognition difficulty. Nor should they increase character speed simply because a student believes faster is always better.

Instead, instructors should adjust the learning environment in ways that preserve sound-pattern formation, such as reducing the number of characters being practiced, increasing repetition, using familiar material, managing spacing appropriately, or providing encouragement and recovery-focused coaching.

POTENTIAL FAILURE MODES

If character speed is reduced too far, LICW instruction can drift away from sound-first learning even if the class appears to be helping in the short term.

The most common failure modes of excessively slow character speed are:

- Students begin counting dits and dahs
- Students visualize characters instead of hearing them
- Students rely on conscious reconstruction
- Recognition becomes slow and effortful
- Students resist normal operating speeds
- Flow does not develop naturally
- Later progress requires unlearning early habits

If character speed is increased too far, a different set of problems can emerge:

- Students fail to form stable sound images
- Recognition becomes guesswork rather than perception
- Fatigue and discouragement increase
- Students confuse difficulty with productive learning
- Only highly apt students can keep up
- Other students disengage or conclude they cannot learn CW

Both failure modes are inconsistent with LICW's academic model.

RELATIONSHIP TO THE LICW CURRICULUM

The Beginners Carousel begins at **12 WPM character speed** because that speed reflects Koch's practical training conclusion: above the Gestalt threshold, but below the level that overwhelms most beginners.

As students progress, the Intermediate curriculum develops increasing effective speed, reduced Time To Recognize, Instant Flow Recovery, and Character Flow Proficiency. These later gains depend on the student having learned the characters as sound patterns from the beginning.

The Advanced curriculum then extends those gains into CW fluency and mastery under more natural and demanding operating conditions. That progression would be weakened if early learning were built on slow analytical reconstruction or on excessive speed that prevents stable sound-pattern formation.

Character speed is therefore not a narrow beginner issue. It is one of the foundations on which the entire LICW learning path rests.

CONCLUSION

Character speed is a foundational academic decision in Morse code instruction.

Koch's work shows that Morse characters must be presented fast enough to be heard as complete acoustic patterns. Below roughly 50 characters per minute, or about 10 WPM, the character begins to lose its acoustic shape. Koch therefore selected 60 characters per minute, or about 12 WPM, as the practical starting speed for initial learning.

LICW's use of 12 WPM character speed in the Beginners Carousel reflects that same principle. It preserves the sound image of the character while keeping the task within reach of most beginners.

For that reason, character speed should not be lowered simply to reduce short-term difficulty, nor raised simply to prevent element-counting. Students should instead be supported through appropriate speed selection, repetition, exposure, recovery, and time.

The goal is not to make Morse code easy in the moment or difficult for its own sake. The goal is to build the auditory foundation required for proficiency, fluency, and mastery.

THE USE OF FARNSWORTH SPACING IN MORSE CODE INSTRUCTION

PURPOSE

This section provides guidance to LICW instructors and a caution to students regarding the use of Farnsworth spacing in Morse code learning. LICW's position is not that Farnsworth spacing has no value. Rather, LICW's position is that it should be used sparingly, cautiously, and only as a temporary instructional accommodation. Overuse can interfere with the development of rhythm, timing, flow, and the listening habits required for real-world Morse code proficiency.

BACKGROUND

Farnsworth spacing generally refers to the practice of sending Morse characters at a higher character speed while increasing the spacing between characters and words. The intent is to expose the learner to the sound of characters at or near the desired target speed while slowing the overall effective speed enough to make early copying manageable.

Although this approach is commonly associated with Donald R. "Russ" Farnsworth, LICW's review found no books, reports, or papers written by Farnsworth on the subject. The technique of lengthening spacing between letters and words appears to have predated him. William G. Pierpont, N0HFF, attributed the idea to earlier teaching practice and noted that Thomas Edison had identified the real difficulty as "the rapid succession" of letters rather than the speed of the individual letters themselves. LICW's analysis also found that the available recording of Farnsworth's Epsilon Records Code Course was sent at approximately 12.6 WPM with no measurable Farnsworth spacing.

That history matters because it reminds us that "Farnsworth" is less a single authoritative method than a teaching convention that evolved over time. It should therefore be evaluated on instructional merit, not tradition.

THE INSTRUCTIONAL ARGUMENT FOR ENHANCED SPACING

The strongest argument in favor of Farnsworth spacing is that it allows students to hear characters at the speed they will eventually need to recognize them. This is an important point. If students learn characters only at very slow character speeds, they may later have to relearn the

sound of those characters at conversational speeds. A character sent slowly can sound quite different from the same character sent at normal operating speed.

This concern is supported by early research. Biegel criticized the older slow-code method because reducing the entire sending process caused characters to lose their auditory identity as complete rhythmic patterns. At slow speeds, characters became atomized into countable sequences of long and short tones, forcing students into a method of perception that later had to be abandoned.

Biegel's proposed alternative was essentially an early form of enhanced-spacing instruction. Characters were presented from the beginning as complete, indivisible sound patterns, while the interval between characters was initially lengthened and then gradually reduced. The aim was to preserve the acoustic shape of the character while giving the learner additional time to make the association.

This is the legitimate instructional value of enhanced spacing. It can help preserve the character as a sound pattern rather than allowing it to be learned as a counted sequence of elements. Used carefully, it may reduce early overload and help some students remain engaged during the initial formation of sound-to-meaning associations.

THE INSTRUCTIONAL RISK OF OVERUSE

The concern is that Farnsworth spacing solves one problem by creating another. Morse code is not merely a collection of isolated character sounds. It is a rhythmic, time-based language. The spacing between elements, characters, and words is part of the structure being learned.

Koch's 1936 study is especially important on this point. Koch emphasized that Morse code has specific proportional timing relationships and that, at a given speed, the ratio of short and long tones and their spacing should remain consistent. He also framed aural Morse reception as a Gestalt process, in which the listener perceives organized sound patterns rather than isolated pieces.

This has direct implications for instruction. When spacing is artificially expanded, the learner is not simply hearing "easier" Morse code. The learner is hearing Morse code under altered temporal conditions. The character may remain intact, but the continuity between characters is changed. That change affects rhythm, anticipation, recovery, and flow.

Biegel's work also supports this caution. Although her enhanced-spacing method was designed to preserve character integrity, it still required students to move through a sequence of progressively shorter intervals until normal spacing was reached. Even in this favorable account, the final transition toward normal timing remained a meaningful instructional hurdle.

Taylor's later experimental work adds a useful balancing note. In Taylor's 1943 study, students were instructed to recognize characters as organized auditory patterns and avoid analyzing them into dots and dashes; however, the broader experimental results caution against assuming that higher-speed character presentation alone will automatically produce superior learning outcomes. The implication for LICW is that Farnsworth spacing should not be treated as a universal solution. It may support one aspect of learning, but it does not by itself develop fluency.

LICW OPERATIONAL EXPERIENCE

LICW's position is not based on research alone. It is also grounded in direct instructional experience.

When LICW began in 2019, the club used a method that was popular at the time: characters were commonly taught at approximately 20 WPM character speed with a much lower effective speed, often around 5 WPM. This reflected the prevailing belief that students should hear characters at a realistic acoustic speed from the beginning, while widened spacing would make early recognition manageable.

Initially, this seemed sensible. Many students could learn to identify characters under those conditions, and the method appeared to reduce early frustration. Over time, however, careful observation of student performance raised concerns.

Many students became stagnant and were unable to progress smoothly into the Intermediate level. The problem often appeared when effective speed was increased beyond approximately 20/6.5. Students who had been comfortable with wide spacing frequently struggled when the space between characters was reduced. They could recognize characters when there was ample time to reset between them, but they had difficulty maintaining continuity when characters began to arrive in closer succession.

This pattern suggested that some students had learned not only the characters, but also the extra space. The widened interval had become

part of the learning environment and, in some cases, part of the learned habit. When the spacing was reduced, the task felt substantially different even though the character speed itself had not changed.

In practical terms, students often reverted to conscious decoding, became anxious when the next character arrived too soon, and lost continuity after a miss. These are exactly the difficulties LICW's flow-based instruction is designed to address. The issue was not simply speed. It was the absence of developed flow under realistic timing.

This institutional experience closely aligns with the research concerns described above. Biegel supports the value of preserving character sound patterns, but only with a deliberate progression toward normal timing. Koch reinforces the importance of rhythm, proportion, and Gestalt perception in Morse code reception. LICW's experience indicates that when widened spacing is used too long, students may not develop the continuity, recovery, and rhythmic processing needed for successful advancement.

LICW INSTRUCTIONAL POSITION

LICW's position is that characters should be taught as complete auditory patterns and at realistic character speeds, but spacing should move toward natural timing as soon as practicable. Enhanced spacing may be used when it serves a clear developmental purpose, but it should not become the primary long-term learning environment.

Instructors should treat Farnsworth spacing as a temporary scaffold. Its purpose is to support early recognition, not to define the student's listening habits. As soon as the student can tolerate reduced spacing, the instructor should begin moving the student toward normal rhythm and timing.

The instructional goal is not merely for students to identify characters. The goal is for students to copy continuous Morse code in a way that resembles real operation. That requires rhythm, continuity, recovery, and flow. Any use of enhanced spacing should therefore be judged by whether it helps the student move toward that goal or allows the student to avoid it.

GUIDANCE FOR INSTRUCTORS

Instructors should be careful not to present Farnsworth spacing as a cure-all or as the default answer to difficulty. Some struggle is expected in learning a real-time skill. If a student is overwhelmed, a modest amount of

additional spacing may be appropriate for a limited period. But the instructor should explain that the spacing is temporary and that the student's eventual goal is to copy code in natural rhythm.

Instructors should watch for signs of dependency. A student who can copy comfortably with wide spacing but falls apart when spacing is reduced may not have developed the necessary flow skills. In that case, the answer is not to restore wide spacing indefinitely. The better approach may be to use shorter material, slower progression, more repetition, and carefully structured practice while continuing to protect natural timing as much as possible.

Instructors should also avoid confusing character speed with fluency. A student hearing characters at 25 WPM with large spaces is not yet copying 25 WPM code in an operational sense. The student is recognizing fast characters under delayed conditions. That may be useful at a particular stage, but it should not be mistaken for conversational copy.

GUIDANCE FOR STUDENTS

Students should understand that Farnsworth spacing can make early practice feel more manageable, but it can also become a trap if relied upon too long. The extra space gives the mind time to think. Real Morse code requires the ability to keep moving without that extra time.

The student's long-term objective is not to decode isolated characters with long pauses between them. The objective is to hear Morse as a continuous stream of sound and meaning. That requires practice under conditions that increasingly resemble real code.

Students should therefore welcome the gradual reduction of extra spacing, even when it feels uncomfortable at first. Difficulty during that transition does not mean failure. It means the student is beginning to develop the next layer of skill. The goal is not perfect copy. The goal is to remain relaxed, stay with the rhythm, recover quickly, and allow recognition to become more automatic over time.

CONCLUSION

Farnsworth spacing addresses a real instructional challenge: beginners often struggle less with the sound of individual characters than with the rapid succession in which those characters arrive. Used sparingly, it can

help students hear characters at realistic speeds while reducing early overload.

But Farnsworth spacing also has real costs. It alters rhythm, changes timing, and creates an artificial listening environment. If used too long or too broadly, it can delay the development of flow skills and make the later transition to natural code more difficult.

For that reason, LICW regards Farnsworth spacing as a limited, transitional tool. It should be used with purpose, reduced deliberately, and removed as soon as the student is ready. LICW's instructional priority remains the development of operators who can copy and send Morse code as it is actually used: rhythmically, continuously, and in real time.

SOURCES AND CONTEXT

This section reflects both LICW instructional experience and a review of historical Morse code training literature, including work by Biegel, Koch, Taylor, and Pierpont, as well as LICW's analysis of Farnsworth/Epsilon Records materials.

CHARACTER INTRODUCTION SEQUENCE AND COMMUNICATION-DRIVEN LEARNING

PURPOSE

This section explains the rationale behind LICW's character introduction sequence in the Beginners Carousel and its alignment with early communication in Morse code. It also clarifies the historical misunderstanding surrounding the so-called "Koch sequence" and provides guidance for future curriculum development.

BACKGROUND

Many Morse code training programs adopt a fixed character sequence commonly described as the "Koch sequence." This sequence begins with **K M R S U** and is frequently presented as though it originated with Ludwig Koch or formed a central part of his instructional method.

LICW's review of Koch's original report did not support that conclusion.

Koch did not provide a single, explicit character sequence for instructional use. Instead, he provided exercise charts from which a sequence can be inferred only by applying his teaching method. This was perplexing: if a fixed sequence were central to Koch's method, one would expect him to have stated it directly.

Further review showed that Koch used more than one sequence. In at least one instance, he used a sequence weighted with easier characters early in the progression as part of an attempt to demonstrate that his two-tone method produced faster learning results. He also did not disclose the size of that test group. The use of different sequences and the absence of complete test-group information make it difficult to treat Koch's character ordering as a controlled scientific finding.

LICW's research further found that the commonly cited sequence beginning **K M R S U** was not developed by Koch. It originated with **Otto Lipmann**, who developed the sequence in 1919 and published it in 1928.

Lipmann's work is important, but not because it established an ideal instructional sequence for communication. Lipmann theorized that future performance in Morse code acquisition could be predicted by how well a student learned the first few Morse characters. To test that idea, he taught

71 students what he described as an obscure character sequence of varying difficulty, beginning **K M R S U**.

Lipmann's central insight was that early performance on a small number of characters could predict later performance in Morse code learning. Donald Taylor later validated Lipmann's findings in his 1943 doctoral thesis at Harvard. To this day, one of the strongest predictors of future performance in Morse code acquisition is how well a student learns the first few characters.

This matters because the so-called "Koch sequence" is better understood as an aptitude-testing sequence than as a communication-driven curriculum sequence. It may have historical and research value, but it should not be treated as authoritative guidance for how LICW should introduce characters to beginners.

LICW POSITION

LICW does not adopt the so-called "Koch sequence" as its character introduction sequence.

Instead, LICW uses a **communication-driven character sequence** designed to support early exposure to QSO structure, common abbreviations, and meaningful on-air interaction.

The goal is not simply to teach students Morse characters. The goal is to help students begin learning how to **communicate in Morse code as they learn those characters**.

Character introduction is therefore aligned with:

- Frequency of use in typical QSOs
- Common procedural signals and abbreviations
- Early construction of meaningful exchanges
- Reinforcement of real-world operating patterns

INSTRUCTIONAL RATIONALE

Morse code is not merely an abstract set of symbols. It is a communication medium.

If students learn characters in an order that does not support communication, they may become able to recognize isolated characters

while remaining unable to form meaningful exchanges. This can delay on-air readiness and reinforce the mistaken idea that Morse code learning is separate from Morse code use.

LICW takes the opposite approach. The Beginners Carousel introduces characters in a way that allows students to begin encountering useful QSO patterns and abbreviations early in the learning process. Students are not merely collecting characters; they are beginning to hear and use the building blocks of real communication.

This approach supports motivation, context, and retention. It also helps students understand from the beginning that the purpose of learning Morse code is not simply recognition, but communication.

EARLY INTRODUCTION OF QSO PROTOCOL

LICW's character sequence is designed to support early exposure to QSO protocol and common operating language.

This includes elements such as:

- Calling and answering
- Identification
- Common procedural signals
- Signal reports
- Names and locations
- Acknowledgments
- Common closing conventions

As students acquire more characters, they are increasingly able to recognize and use real QSO elements. This allows QSO protocol and QSO abbreviations to enter the Beginners curriculum naturally rather than appearing later as a separate subject.

This is an important distinction. LICW does not want students to finish learning characters and only then begin learning how Morse code is used. LICW wants students to begin learning communication while they are learning the characters.

FREQUENCY-OF-USE CONSIDERATIONS

The LICW character sequence is guided by the frequency with which characters appear in typical QSO protocol, callsigns, abbreviations, and standard exchanges.

Characters that occur frequently in meaningful operating contexts are introduced early when practical. This allows students to encounter recurring patterns sooner and to begin forming useful sound associations in context.

This does not mean the sequence is a rigid frequency table. It is a practical curriculum design choice that balances character learning, pattern exposure, communication value, and instructional flow.

The important point is that character order serves the curriculum's communication goals.

CONTRAST WITH APTITUDE-TESTING SEQUENCES

A sequence designed to test aptitude is not necessarily a sequence designed to teach communication.

Lipmann's **K M R S U** sequence has historical importance because it helped demonstrate that early learning performance predicts later Morse code acquisition. It was intentionally obscure and varied in difficulty. That made sense for aptitude testing, where the objective was to measure learning capacity without relying on familiar patterns.

That objective is different from LICW's objective.

LICW is not trying to obscure meaning from the beginner. LICW is trying to help the beginner form sound-first recognition while gradually entering the language, rhythm, and structure of CW communication.

For this reason, adopting an aptitude-testing sequence as a beginner curriculum sequence would be a category error. It would confuse a research tool for predicting performance with a teaching tool for developing communicative competence.

IMPLICATIONS FOR FUTURE CURRICULUM DEVELOPMENT

Future curriculum developers should understand that LICW's character sequence is not arbitrary and should not be replaced casually.

It reflects a deliberate instructional choice:

- To prioritize communication over isolated recognition
- To align early learning with real-world QSO use
- To introduce QSO protocol and abbreviations as part of character learning
- To support sound-first, flow-based, communication-oriented development

Developers should be cautious about reverting to standardized, inherited, or historically misattributed sequences simply because they are common elsewhere.

Before changing the LICW sequence, future curriculum leaders should ask:

- Does the proposed sequence support early communication?
- Does it reinforce common QSO patterns and abbreviations?
- Does it align with frequency of use in practical operating?
- Does it support flow-based learning?
- Does it help students experience Morse code as communication from the beginning?

If the answer is no, the proposed change is likely inconsistent with the LICW Method.

RELATIONSHIP TO THE LICW CURRICULUM

In the Beginners Carousel, character introduction is integrated with sound-first recognition, early flow development, guided practice, and preparation for on-air operating.

This creates a cohesive learning experience in which students are not only learning characters, but also beginning to understand how those characters function in real communication.

As students progress into Intermediate, this early exposure supports word discovery, conversational development, and greater confidence on the air. Students who have encountered QSO elements early are better prepared

to understand Morse code as a living communication system rather than as a set of disconnected sounds.

CONCLUSION

LICW's character introduction sequence is designed to support communication from the earliest stages of learning.

The commonly cited "Koch sequence" beginning **K M R S U** was not Koch's instructional sequence. It originated with Otto Lipmann as part of aptitude-testing work and was later validated by Donald Taylor as a predictor of future performance in Morse code acquisition.

That finding is important, but it does not make the sequence the right basis for a communication-driven curriculum.

LICW's approach is different. Its character sequence is designed to introduce students to the sounds, patterns, abbreviations, and structure of real Morse communication as they learn the characters.

Future curriculum development should preserve this principle. Character sequence should serve communication, not historical misunderstanding, inherited convention, or the assumptions of aptitude testing.

ON THE USE OF TWO-CHARACTER INTRODUCTION METHODS

PURPOSE

This section explains why LICW does not adopt the two-character introduction method found in many Morse code training systems and clarifies its historical origins in Koch's work. It provides guidance for preserving a one-character-at-a-time approach in alignment with LICW instructional principles.

BACKGROUND

Many modern Morse code trainers introduce characters in pairs rather than individually. This approach is often attributed to Koch and is commonly assumed to be part of the "Koch method."

In practice, this results in students learning two new characters at a time and working to distinguish between them before additional characters are introduced.

Because this approach is widely used and frequently associated with Koch, it may appear to be historically validated and instructionally sound.

However, a careful reading of Koch's work suggests a more nuanced and cautionary interpretation.

HISTORICAL FOUNDATION

Koch explored the use of two-character introduction extensively and, by his own account, was initially convinced of its effectiveness. The approach aligned with a reasonable hypothesis: that students might more quickly learn Morse code by discriminating between a small number of contrasting patterns.

He developed and tested this method with the expectation that it would produce faster learning results.

However, his findings did not support that expectation.

Koch ultimately concluded – reluctantly - that the two-character method did not produce superior outcomes. While it could function under certain conditions, it did not provide the consistent advantages he had anticipated.

In particular, it did not reliably support the development of stable, independent recognition as additional characters were introduced.

This is an important point for curriculum design.

The two-character approach was not the proven foundation of Koch's method. It was a tested hypothesis that did not deliver the expected results.

LICW POSITION

LICW does not use the two-character introduction method.

Instead, LICW introduces one character at a time, while maintaining previously learned characters in continuous practice.

This approach preserves the core elements of the Koch method:

- Learning at appropriate character speed
- Immediate use of characters in combination
- Continuous reinforcement of prior material

while avoiding the complications introduced by simultaneous introduction of new characters.

INSTRUCTIONAL RATIONALE

The central challenge in Morse code learning is not simple discrimination between a small number of characters. It is the gradual development of a stable and expanding set of sound patterns that can be recognized automatically in continuous flow.

When two new characters are introduced at the same time:

- The student must divide attention between two unfamiliar patterns
- Confusion between the two characters becomes more likely
- Reinforcement of each individual sound pattern is reduced
- Early errors may be repeated and reinforced

By contrast, when one character is introduced at a time:

- The student can focus on forming a single new sound pattern
- That pattern can be reinforced immediately in combination with known characters
- Confusion is reduced
- Repetition is concentrated and more effective

This approach aligns with LICW's emphasis on sound-first recognition, repetition, and flow-based learning.

RELATIONSHIP TO FLOW-BASED LEARNING

LICW's instructional model depends on students learning to remain in the stream while recognizing characters as sound patterns.

Introducing two new characters simultaneously increases cognitive load at the moment when the student is least prepared to manage it. Instead of supporting flow, it can interrupt it.

The one-character approach allows new material to be integrated more smoothly into ongoing practice. Students continue to operate within a familiar set of principles while gradually expanding their character set.

This supports continuity, reduces frustration, and encourages steady progress.

PRACTICAL OBSERVATIONS

In practice, the two-character approach often produces:

- Increased confusion between newly introduced characters
- Slower stabilization of recognition
- Greater variability in student performance
- Increased reliance on analytical decoding

These effects may not always be immediately visible, but they can influence the rate and quality of long-term development.

By contrast, the one-character approach produces:

- Clearer sound-pattern formation
- More stable recognition
- Smoother integration into continuous practice
- Stronger progression toward flow

INSTRUCTOR GUIDANCE

Instructors should be aware that students may encounter two-character methods in external training tools or prior experience.

These methods should not be adopted within LICW instruction.

Helpful instructor language includes:

- “We introduce one character at a time so you can clearly learn the sound.”
- “You will still be working with all your characters together in practice.”
- “This helps you build each sound pattern cleanly before adding the next one.”

The goal is not to slow progress, but to ensure that progress is stable and cumulative.

RELATIONSHIP TO THE LICW CURRICULUM

In the Beginners Carousel, each new character is introduced individually and immediately integrated into multi-character practice.

Students are never working with a single isolated character. Instead, they are working with an expanding set of characters in continuous combinations.

This preserves the advantages of the Koch method - learning in context and at speed - while avoiding the drawbacks of introducing multiple new factors at once.

CONCLUSION

The two-character introduction method is often associated with Koch but was, in fact, an experimental approach that did not produce the expected benefits.

Koch's own work suggests that introducing multiple new characters simultaneously does not reliably support efficient learning.

LICW therefore adopts a one-character-at-a-time approach, integrated into continuous practice, as the more effective method for building stable sound-pattern recognition.

Future curriculum development should preserve this principle. Character introduction should minimize unnecessary cognitive load, support clear pattern formation, and align with the long-term goal of fluent, real-time Morse code communication.

EARLY INTRODUCTION OF NUMBERS AND PROSIGNS

PURPOSE

This section explains why LICW introduces numbers and prosigns alongside letters in the Beginners Carousel, rather than delaying them until later stages of instruction. It also explains how this approach supports communication-driven learning and helps students encounter Morse code as practical language from the beginning.

BACKGROUND

Many Morse code training programs introduce letters first and defer numbers and prosigns until a later stage. This approach is often justified on the basis of simplicity. By limiting the initial character set, early learning may feel more manageable and structured.

While this approach may reduce short-term difficulty, it introduces a separation between character learning and communication. Students may become comfortable recognizing letters in isolation, but remain unable to understand or participate in even the simplest real-world exchanges.

LICW has intentionally chosen a different approach.

LICW POSITION

LICW introduces numbers and prosigns alongside letters as part of the initial learning process.

This is a deliberate curriculum design decision aligned with a central principle of the LICW Method:

Students should begin learning how to communicate in Morse code as they learn the characters. Numbers and prosigns are not treated as advanced or secondary material. They are fundamental components of real Morse code communication and are introduced accordingly.

INSTRUCTIONAL RATIONALE

Morse code is not composed solely of letters. Real-world communication depends heavily on:

- Numbers (signal reports, frequencies, locations, dates, times)
- Prosigns (procedural signals such as AR, BT, SK, KN)
- Abbreviations that combine letters, numbers, and prosigns

If these elements are withheld during early instruction, students are learning an incomplete version of Morse code.

This creates a gap between:

- Learning Morse characters
- Using Morse code for communication

LICW's approach eliminates that gap by integrating all essential components from the beginning.

COMMUNICATION FROM THE START

Introducing numbers and prosigns early allows students to encounter realistic QSO patterns sooner.

Even with a limited character set, students can begin to recognize elements such as:

- Signal reports (e.g., 5NN)
- Common procedural markers (BT, AR)
- Call structure and spacing
- The rhythm of a real exchange

This reinforces the idea that Morse code is not an abstract system to be mastered first and used later. It is a communication system that can be experienced and understood progressively.

Students are therefore not waiting to "finish learning the code" before using it. They are learning to use it as they go.

RHYTHM AND PATTERN DEVELOPMENT

Numbers and prosigns also contribute to the development of rhythm and pattern recognition.

Many prosigns function as single acoustic units and reinforce the concept that Morse code is heard as patterns rather than assembled piece by piece. Numbers, while sometimes longer in structure, introduce variation and expand the student's exposure to different rhythmic forms.

By incorporating these elements early, LICW strengthens:

- Pattern diversity
- Auditory flexibility
- Recognition of non-letter structures
- Overall familiarity with Morse as a language

CONTRAST WITH LETTER-FIRST APPROACHES

The letter-first approach simplifies early learning by reducing the number of elements the student must manage. However, it also delays exposure to key aspects of real communication.

This can lead to several issues:

- Students develop an incomplete mental model of Morse code
- Transition to real QSOs becomes more difficult
- Additional learning phases are required later
- Students may experience a second "learning curve" when numbers and prosigns are introduced

LICW's approach avoids this staged disruption by integrating all core elements from the beginning.

While this may feel slightly more complex at first, it produces a more continuous and cohesive learning experience over time.

INSTRUCTOR GUIDANCE

Instructors should present numbers and prosigns as natural components of Morse code, not as advanced material.

Helpful language includes:

- “Numbers and prosigns are part of how Morse code is actually used.”
- “You don’t need to master them all at once - just become familiar with the sound.”
- “You will hear these in real QSOs, so it’s good to start recognizing them early.”

The goal is not immediate mastery, but early exposure and gradual familiarity.

Students should be encouraged to:

- Hear the sounds
- Recognize patterns when possible
- Remain in the stream without pressure to copy perfectly

RELATIONSHIP TO THE LICW CURRICULUM

In the Beginners Carousel, the introduction of numbers and prosigns supports:

- Early exposure to QSO protocol
- Integration of communication patterns
- Reinforcement of sound-first learning
- Development of flow in realistic contexts

As students move into Intermediate levels, this early exposure reduces the need for separate instruction and allows for a smoother transition into conversational practice.

Students who have already encountered these elements are better prepared to:

- Understand real exchanges
- Recognize procedural structure
- Participate on the air with greater confidence

POTENTIAL FAILURE MODES

If numbers and prosigns are delayed, the following issues may arise:

- Difficulty understanding real QSOs
- Disruption of flow when unfamiliar elements appear later
- Increased cognitive load during transition
- Hesitation that leads to missed characters and loss of continuity
- Perception that Morse code learning occurs in disconnected stages

These effects can slow progression toward on-air readiness and interfere with the forward-moving continuity that LICW seeks to develop from the beginning.

CONCLUSION

LICW introduces numbers and prosigns alongside letters because Morse code is a communication system, not a staged sequence of isolated elements.

Early exposure to these components allows students to begin understanding and experiencing real communication as they learn the characters.

This approach may be slightly more demanding at the outset, but it produces a more coherent, continuous, and communication-focused learning experience.

Future curriculum development should preserve this principle. Students should not be asked to learn Morse code in isolation and only later learn how it is used. They should learn both together, from the very beginning.

ENHANCING THE LEARNING OF MORSE CODE WITH RHYTHM

INTRODUCTION

LICW has a strong interest in the extent to which musical rhythm may support Morse code acquisition. In particular, the club is interested in whether rhythm-based approaches may help students perceive Morse code as patterned sound and thereby support more efficient learning.

Classroom observation has long suggested a relationship between musical ability and Morse code acquisition. Students with musical backgrounds often appear to progress more quickly and to develop stronger proficiency. Historical support for that observation can be found in early telegraphy research, including Thurstone's 1919 finding that rhythm was strongly associated with success in telegraphy.

This raises an important instructional question: if musical aptitude - particularly rhythm, timing, and tonal memory - contributes to success in Morse code learning, can rhythm-based approaches be used to strengthen acquisition for a broader range of students?

THE SYMMETRY AND TIMING OF MORSE CODE

The Morse timing standard adopted by ARRL for training materials, code tests, and W1AW transmissions is as follows:

- A dot is one unit
- A dash is three units
- One unit separates each element within a character
- Three units separate each character within a word
- Seven units separate each word

For purposes of measuring speed, the standard **PARIS** 50-unit word is used. Words per minute are derived from the number of times the 50-unit word *PARIS* is sent in one minute. This standard provides the timing principles within which Morse rhythm is experienced and taught.

THE HARMONIC ORIGINS OF MORSE CODE

Chris Rutkowski, NW6V, has argued that the familiar 3:1 timing relationship of International Morse did not originate in Samuel Morse's original American Morse, but emerged later through Friedrich Gerke's 1848

revision for the German Post Office. In this view, the now-familiar structure of one-unit dits and three-unit dahs reflects not only efficiency, but also a form of rhythmic regularity that may help explain why Morse is experienced as patterned sound rather than as arbitrary signal lengths.

Rutkowski also offers an explanation for the seven-unit separation between words, illustrating how the motion of the hand and the on/off state of the signal can be understood as rhythmically aligned. Whether or not one accepts the broader harmonic interpretation, the discussion is useful because it draws attention to the inherently rhythmic structure of Morse timing.

ENHANCING THE LEARNING OF MORSE CODE WITH RHYTHM

Rhythm appears to play a particularly important role in Morse code learning because pitch and timbre, unlike in most music and spoken language, remain comparatively fixed. In that sense, the learner's ear is working primarily with timing, duration, grouping, and pattern.

Koch's discussion of Bucher's 1924 report, *Work and Rhythm*, suggests that rhythm can positively influence performance when learning conditions are structured to take advantage of it. More recently, Mohapp's 2015 thesis examined rhythm perception in music as a teaching and learning process for Morse code. Her review of wartime training techniques used by the Women's Royal Australian Naval Service suggests that musical rhythm may indeed have played a positive role in the rapid acquisition of code skill.

For additional perspective, LICW consulted orchestra conductor Johannes Stosch, KI6M. Stosch's view is that the ear is the primary teacher. As with language learning or musical training, repeated exposure to good sound patterns is central. He acknowledges the symmetry of Morse timing, but places greater emphasis on rhythm than on harmonic interpretation. In his view, individual letters are too variable in length to align with a fixed beat, but words and common operating units often develop recognizable rhythmic identities.

That observation is especially relevant to LICW because it aligns closely with the club's emphasis on flow, pattern recognition, and the transition from character assembly to word discovery. Common items such as **RST, FER, BK, AS, SK**, and callsigns may begin to stand out not because of pitch, but because of their recurring rhythmic signatures.

THE DIFFERENCE BETWEEN RHYTHM AND BEAT

It is useful to distinguish **rhythm** from **beat**. Beat is the fixed underlying tempo of a piece, like a metronome. Rhythm is the pattern of variable durations and accents that unfolds against that tempo. Morse code resembles rhythm more than beat. Character and word lengths vary continuously and do not align to a uniform metrical pulse. In that sense, Morse is not metronomic; it is rhythmic.

This distinction matters because it suggests that rhythm-based support for Morse learning is unlikely to come from imposing a fixed beat. It is more likely to arise from helping learners perceive recurring temporal patterns at the level of words, phrases, and familiar operating forms.

LICW EFFORTS TO PRODUCE MUSICAL CONTENT

LICW has experimented with adding CW to musical and rhythm-based video content. Results have been mixed. Some attempts appeared to support recognition, while others did not. These experiments suggest that the mere presence of music is not enough; if rhythm is to support learning, the relationship between music and Morse timing must be carefully designed.

That conclusion is important. It suggests that rhythm may have real instructional potential, but that effective implementation likely requires collaboration among musicians, educators, and experienced CW practitioners. At present, the evidence is promising but exploratory rather than definitive.

THE MORSEBASS PROJECT

A current example of exploratory rhythm-based work is the **MorseBass** project, developed by Elfenworks Productions LLC in association with LICW. The project presents Morse in a music- and rhythm-informed format and is centered primarily on **words, chat words, and communication units** rather than on isolated character instruction.

That emphasis is instructionally significant. It suggests that rhythm-based enhancement may be more naturally suited to **common words, recurring operating forms, and phrase-level familiarity** than to the initial teaching of single Morse characters. Individual letters are often too brief and too variable in duration to benefit consistently from musical treatment, whereas

common words and familiar communication forms may be more capable of acquiring recognizable rhythmic identity.

In that sense, projects such as MorseBass appear most compatible with later stages of recognition, where learners are moving beyond isolated character assembly and toward larger meaningful units. This interpretation is also consistent with LICW's view that rhythm is best understood as a supporting process, not a replacement for sound-first character learning.

From an instructional perspective, rhythm-based projects such as MorseBass may prove useful in at least three ways:

1. They may help learners notice and remember the rhythmic character of common words and operating forms.
2. They may support engagement, repetition, and enjoyment, especially for younger learners or non-traditional audiences.
3. They may open additional pathways for communication-oriented applications and exploratory learning.

These possibilities are promising, but they remain exploratory. In the LICW model, they are best viewed as extensions of rhythm-based support, not as substitutes for the club's core instructional approach of learning Morse characters as unified acoustic patterns.

CONCLUSION

The available evidence suggests that rhythm may play a meaningful role in Morse code acquisition. Historical research, classroom observation, and current exploratory work all point to the possibility that rhythmic perception may support recognition of Morse as patterned sound rather than as isolated elements.

At the same time, the precise instructional value of rhythm-enhanced training remains an open question. Within the LICW academic model, rhythm is best understood as a promising adjunct to sound-first learning - worthy of continued exploration, but not a replacement for the club's core pedagogical principles.

INITIAL SENDING METHOD - STRAIGHT KEY VS. PADDLES AND KEYERS

PURPOSE

This section explains LICW's position that beginner students should begin Morse code sending with a straight key rather than paddles, electronic keyers, or keyboards. It defines the instructional rationale for that position and its role in supporting sound-first learning, rhythm development, and long-term proficiency.

BACKGROUND

Modern CW operators have access to a wide range of sending methods, including dual-lever paddles with electronic keyers and computer-based keyboard transmission. These tools are efficient, widely used, and entirely appropriate in many operating contexts.

However, the question for instruction is not what tools are available, but what best supports the development of foundational skill.

Beginning students are not yet sending fluently. They are learning to associate sound with character, to internalize rhythm, and to develop continuity between what they hear and what they produce. The initial sending method should reinforce those goals, not bypass them.

LICW POSITION

LICW's position is that beginner students should start with a straight key.

Paddles, keyers, and keyboards may be introduced later as the student develops greater proficiency, but they should not be the primary sending method during initial learning.

This is not a position based on tradition or preference. It is based on how beginners acquire timing, rhythm, and sound association.

ACCESSIBILITY AND MEDICAL REALITIES

This position should be applied with kindness and judgment. For some students, especially those dealing with arthritis, hand pain, tremor, fatigue, limited mobility, injury, or other medical realities, a straight key may be

uncomfortable or impractical. In those cases, the use of paddles, a keyer, or another appropriate sending method may allow the student to participate more fully.

LICW should acknowledge that reality with kindness and respect. The purpose of the straight-key recommendation is to support foundational rhythm, timing, and sound association. It is not intended to create a barrier for students whose physical circumstances make straight-key use difficult.

When an alternate sending method is used for medical or accessibility reasons, instructors should still encourage the same underlying goals: careful listening, correct rhythm, sound-first learning, and awareness of the relationship between what is heard and what is sent.

INSTRUCTIONAL RATIONALE

Morse code is fundamentally rhythmic. Each character is not just a sequence of elements, but a patterned sound with internal timing and proportion.

A straight key requires the student to generate that rhythm manually. Each element **-** dit, dah, and space **-** is formed by the student's own action. This creates a direct physical and auditory connection between:

- The sound of the character
- The timing of the elements
- The motor action used to produce it

This coupling reinforces learning in a way that is difficult to replicate with automated sending methods.

When a student uses a paddle and electronic keyer, the timing of the elements is generated by the device. The student initiates the sequence, but does not form each element individually. This can be efficient, but it reduces the student's engagement with the internal structure of the character.

With keyboard sending, that connection is reduced further. The student types text and the device generates the Morse code entirely. In that case, the act of sending is no longer tied to the sound or structure of the code.

For a beginner, these methods risk turning sending into a triggering activity rather than a learning activity.

RHYTHM AND SOUND DEVELOPMENT

Early sending is not primarily about communication speed. It is about learning to *feel* and *hear* correct rhythm.

A straight key encourages:

- Awareness of element length (dit vs. dah)
- Awareness of spacing within the character
- Awareness of overall character rhythm
- Synchronization between hearing and producing the code

These are foundational skills that support later receiving, not just sending.

When students develop a sense of rhythm through manual formation, they are better able to recognize that same rhythm when listening. This strengthens sound-first recognition and supports flow.

RELATIONSHIP TO RECEIVING SKILL

Sending and receiving are closely linked in early learning.

When a student forms a character manually, they are reinforcing the auditory pattern associated with that character. This can support retention and recognition.

If sending is automated too early, that reinforcement is weakened. The student may be able to send characters using a paddle or keyboard without fully internalizing their sound.

LICW's approach seeks to align sending practice with receiving development, especially in the early stages.

WHEN TO INTRODUCE PADDLES AND KEYERS

Paddles and keyers are valuable tools and should be introduced as the student progresses.

Once a student demonstrates:

- Stable character recognition
- Developing flow
- Basic rhythmic consistency

They may transition to paddles and a keyer.

At that stage, the student already has an internal model of correct timing. The keyer then becomes a tool for efficiency rather than a substitute for learning.

Keyboard sending may also have a place in specific operating contexts, but it should not replace the development of manual sending skill during early learning.

INSTRUCTOR GUIDANCE

Instructors should recommend the straight key for beginners and explain the rationale clearly.

Helpful language includes:

- “The straight key helps you learn the rhythm of the code.”
- “You are building the sound as you send it.”
- “This is about learning the feel of the characters, not speed.”
- “You can move to paddles later once the sound is solid.”

Students who already own paddles or prefer them should not be discouraged from participating, but instructors should explain that the straight key provides specific learning benefits in the early stages.

The goal is guidance, not enforcement, but the recommendation should be clear and consistent.

POTENTIAL FAILURE MODES

If beginners rely exclusively on paddles, keyers, or keyboards too early, several issues may arise:

- Weak sense of internal character rhythm
- Reduced connection between sending and sound

- Mechanical triggering without auditory awareness
- Inconsistent timing habits masked by the keyer
- Limited reinforcement of receiving skill

These effects may not be immediately visible, but they can influence later development.

RELATIONSHIP TO THE LICW CURRICULUM

In the Beginners Carousel, the primary objective is sound-first recognition and early flow. Sending is introduced as a supporting activity, not as a separate performance skill.

The use of a straight key aligns with this objective by reinforcing rhythm, timing, and sound association.

As students move into Intermediate and Advanced levels, sending becomes more fluid and more integrated into conversational operation. At that point, the use of paddles and keyers is entirely appropriate and often preferred.

CONCLUSION

The choice of initial sending method is an instructional decision, not a technological one.

For beginner students, the straight key provides the most direct connection between action, sound, and rhythm. It supports timing, reinforces auditory learning, and aligns with LICW's sound-first teaching approach.

Paddles, keyers, and keyboards are valuable tools, but they should ordinarily be introduced after the foundational auditory and rhythmic skills have been established.

When medical, physical, or accessibility needs make straight-key use difficult, an alternate sending method may be appropriate and should be supported with kindness and good judgment.

<u>The goal is not to delay efficiency. The goal is to build the foundation that makes efficiency meaningful.</u>

LIVE INSTRUCTION, CLASS PRIVACY, AND UNAUTHORIZED RECORDING OR TRANSCRIPTION

PURPOSE

This section explains why LICW academic classes conducted on Zoom are live, private, and not recorded for offline use. It defines the privacy and instructional rationale for this policy, addresses recording, transcription, AI note-taking, and meeting-summary tools, and explains the role of live instruction and real-time feedback within the LICW Method.

BACKGROUND

Modern learning environments often rely on recorded content for convenience and scalability. It is therefore natural for students to request recordings of classes or for organizations to consider building libraries of recorded instruction.

LICW has intentionally chosen a different approach.

The LICW Method is based on live, interactive instruction, immediate feedback, guided practice, and the development of real-time auditory processing skills. That kind of learning is best supported in a live class where instructors can guide students in real time, respond to what is happening, and help students stay in flow.

A recorded, transcribed, or summarized class may preserve words or content, but it does not preserve the instructional environment that makes the class effective. It cannot reproduce the instructor's real-time judgment, the adjustment of difficulty, the correction of rhythm and timing, or the encouragement that helps students recover from mistakes and remain engaged.

LICW POSITION

LICW academic classes, forums, and meetings are conducted live and private. They may not be recorded, transcribed, summarized, processed, captured, distributed, or retained without prior LICW authorization.

This policy applies to audio recording, video recording, screen recording, automated transcription, AI note-taking, AI meeting summaries, third-party note-taking bots, transcription bots, browser extensions, Zoom-based tools, locally run applications, mobile devices, or similar technologies.

It also applies regardless of how the tool is used. A prohibited tool may be built into Zoom, added through a browser extension, launched as a separate application, connected as an automated meeting participant, run locally on a computer or mobile device, or operated through another device in the room.

LICW does not provide recorded academic classes for offline use as a substitute for live instruction. This policy is based on both privacy considerations and instructional effectiveness.

PRIVACY AND LEARNING ENVIRONMENT

LICW classes are intended to be safe and comfortable places to learn.

Students must be free to:

- Make mistakes
- Ask questions
- Experiment with new skills
- Struggle through difficult material
- Recover from missed copy

They must be able to do these things without concern that their participation is being captured, preserved, analyzed, or distributed outside the live class environment.

Recording changes behavior. When participants know they are being recorded or automatically transcribed, they often become more self-aware and cautious. This can lead to reduced participation, hesitation in asking questions, avoidance of risk-taking, and reluctance to make mistakes openly.

These effects are subtle but significant. They can interfere with growth, especially in a skill that depends on repetition, experimentation, recovery, and confidence through imperfection.

For this reason, LICW prioritizes a private, non-recorded environment that encourages active participation and learning.

AI NOTE-TAKING, TRANSCRIPTION, AND MEETING-SUMMARY TOOLS

AI note-taking tools, automated transcription services, meeting-summary tools, and similar technologies should be treated as recordings for purposes of LICW academic classes.

Even when these tools are described as note-taking rather than recording, they may capture, preserve, summarize, analyze, process, retain, or distribute class content. This may include student questions, copying attempts, mistakes, instructor feedback, chat comments, names, voices, and other class interactions.

Examples include Otter.ai, Zoom AI Companion, Zoom transcription or summary tools, automated notetakers, transcription bots, screen-recording tools, browser extensions, or similar services.

Members may not enable, invite, launch, or use these tools in LICW academic classes unless specifically authorized by LICW for an approved accessibility, administrative, or instructional purpose.

This policy is not intended to prevent ordinary personal note-taking by students. Students may take their own private handwritten or typed notes for learning purposes. The concern is automated capture or processing of class activity in a way that changes the privacy, comfort, and trust of the learning environment.

AI note-taking tools create the same instructional and privacy concerns as recordings. They may make students less willing to ask questions, make mistakes, experiment, or participate openly. They may also create the impression that a class can be reduced to a transcript or summary, when the value of LICW instruction lies in live interaction, immediate feedback, guided practice, and the development of real-time listening skill.

THE ROLE OF LIVE INSTRUCTION

The LICW Method depends on live interaction between instructor and student.

Morse code learning is not simply exposure to content. It is a dynamic process that requires:

- Immediate feedback

- Correction of timing and rhythm
- Adjustment of difficulty
- Reinforcement of correct habits
- Interruption of incorrect habits
- Encouragement through frustration and missed copy

In a live class, the instructor can hear how a student is copying or sending, identify emerging errors or inefficiencies, adjust pacing and content in real time, guide the student back into flow, and reinforce recovery after misses.

This feedback loop is central to the LICW Method.

WHY RECORDED CLASSES ARE NOT A SUBSTITUTE

A recording can present information, but it cannot provide real-time guidance.

Recorded instruction cannot:

- Respond to student errors
- Correct timing or rhythm
- Adapt to the student's level
- Reinforce proper habits at the moment they are formed
- Help a student recover when flow breaks
- Adjust the exercise to match the needs of the class

As a result, recorded instruction tends to become passive. The student may listen or watch, but is not being guided in real time.

This matters because a core principle of LICW instruction is: Practice makes permanent, not perfect.

When students practice without guidance, they risk reinforcing incorrect patterns, including improper timing, analytical decoding habits, inconsistent rhythm, loss of flow, and poor recovery habits.

Once established, those habits can be difficult to correct.

Live instruction reduces this risk by ensuring that practice is observed, guided, and corrected in real time. Recorded instruction, by contrast, can unintentionally encourage unsupervised repetition of errors.

For that reason, LICW prioritizes live participation over convenience. The decision not to provide recorded academic classes is not an operational limitation. It is an intentional part of the curriculum design.

ACCESSIBILITY CONSIDERATIONS

Accessibility needs should be handled thoughtfully and compassionately.

When a student requires assistance with note-taking, hearing, comprehension, disability access, or another learning-related need, LICW should consider the specific need and the least intrusive way to support access while preserving the privacy and instructional integrity of the class.

Any exception involving recording, transcription, AI note-taking, meeting-summary tools, or similar technologies must be authorized by LICW leadership in advance.

If a student has an accessibility need that may require an exception, the student should be referred to LICW leadership so an appropriate accommodation can be considered. Individual instructors should not be expected to evaluate or approve these tools during class.

The goal is to support participation while maintaining the live, private, and interactive learning environment that makes LICW instruction effective.

INSTRUCTOR GUIDANCE

Instructors should be consistent in communicating and enforcing this policy.

If students ask why recordings, transcripts, or AI summaries are not available, instructors may explain that LICW classes are live and private because students need a comfortable environment in which to practice, make mistakes, recover, ask questions, and receive real-time feedback.

If an AI notetaker, transcription bot, meeting assistant, automated summary tool, or other unauthorized recording or transcription tool appears in class, the instructor should address it promptly and calmly. A simple explanation is sufficient:

“LICW classes are live and private. We do not permit automated recording, transcription, AI note-taking, or meeting-summary tools in class without prior authorization.”

If the tool was enabled by a student, the instructor should first ask the student to disable it or remove it from the session.

If the student complies, the instructor may continue the class without further discussion.

If the student does not comply, if the tool remains active, or if the instructor believes the privacy of the class is still being compromised, the instructor should claim host or co-host authority if necessary and remove the automated participant or the student from the Zoom session.

Instructors do not need to debate the policy during class. The goal is to protect the learning environment, not to argue about the technology.

If a student explains that the tool is needed for accessibility or note-taking support, the instructor should refer the student to LICW leadership so an appropriate accommodation can be considered. The tool should not remain active in class unless it has already been authorized by LICW.

Instructors should also be alert to Zoom settings, participant names, audio prompts, captions, chat messages, or other indicators that recording, transcription, AI note-taking, or meeting-summary tools have been enabled.

Any intentional, repeated, or disputed use of unauthorized recording, transcription, AI note-taking, or meeting-summary tools should be reported to LICW leadership after class. If a student is removed from class for this reason, the instructor should notify leadership promptly and provide a brief description of what occurred.

CONCLUSION

The LICW policy on live instruction and class privacy is not merely administrative. It is part of the instructional design of the LICW Method.

Students learn Morse code most effectively when they participate in real time, receive immediate feedback, and feel safe enough to make mistakes openly. A private, non-recorded class environment protects that process.

LICW should continue to preserve live, private, interactive academic classes as a core feature of the curriculum while addressing accessibility needs with care, judgment, and appropriate authorization.

POSITION ON DECODERS

EXECUTIVE SUMMARY

Morse decoders, sometimes called translators, are now common. They appear as built-in features in modern transceivers, as software applications, and increasingly as AI-assisted tools. LICW students will encounter them, and some will use them.

LICW's responsibility is not to moralize or judge, but to provide clear and practical guidance consistent with the club's instructional mission.

That mission is best understood through three developmental phases: the Path to Proficiency, the Path to Fluency, and the Path from Fluency to Mastery. Within that model, decoders should be understood not as ethical violations, but as tools whose value depends on whether they strengthen or weaken the skill being developed.

For some members, especially those dealing with health issues, hearing limitations, fatigue, stress, or other medical realities, a decoder may make the difference between being able to participate on the air and not being able to participate at all. LICW should acknowledge that reality with kindness and respect.

At the same time, for members whose goal is to develop independent CW skill, it is important to understand that decoders do not support that outcome and may actively interfere with it.

LICW's position is therefore clear: decoders may serve as accessibility supports, occasional verification tools, and limited sending-feedback tools, but they should be strongly discouraged as a learning aid for students seeking proficiency, fluency, and mastery.

BACKGROUND: WHY THIS GUIDANCE IS NOW NECESSARY

Decoders are not new, but their availability and capability are expanding rapidly. Many operators now have access to CW decoding at little or no additional cost, whether through a radio, a phone, a website, or a software package.

As these tools improve, students may be tempted to use them as a primary route to on-air participation.

LICW's academic concern is practical rather than ideological. When a decoder becomes the primary source of meaning, the student's attention is drawn away from sound and toward printed text. That shift interrupts the repetitions the brain needs in order to develop Morse code as sound, preserve continuity through uncertainty, and build independence from deliberate character-by-character construction.

In short, a decoder may support operating in some contexts while still being training-negative when used as a substitute for listening.

TWO COMPETING ARGUMENTS

The Pro-Decoder Argument

A decoder can function like a quiet Elmer beside the operator. It can reduce anxiety, help confirm uncertain information, and make early on-air participation feel more achievable.

It may also provide legitimate support in cases involving fatigue, hearing limitations, weak signals, QRM, QRN, or other practical constraints. In some settings, especially where an error in a callsign, number, or key exchange item is costly, a decoder may provide useful confirmation.

For some students, this limited support may increase confidence and encourage early operating activity. That benefit should not be dismissed.

The Counter-Argument

When a decoder becomes the primary source of meaning, the student is no longer required to remain in the stream through incomplete copy, tolerate misses, or reconstruct meaning from context.

Continuous decoder reliance weakens sound-first pattern recognition, reduces the development of Instant Flow Recovery, and suppresses the transition from decoding toward flow, word discovery, and conversational comprehension.

A second concern is dependency. When conditions degrade, fists vary, timing becomes irregular, or noise intrudes, the operator who has relied on a decoder often lacks the internal skill required to compensate.

LICW PRINCIPLE: DECODERS ARE NOT "CHEATING," BUT THEY ARE OFTEN TRAINING-NEGATIVE

LICW should avoid framing this issue as one of purity, ethics, or cheating. A decoder is simply a tool. The central academic question is whether its use strengthens or weakens the skill LICW exists to develop.

LICW should also avoid judging members whose health, hearing, fatigue level, or other physical realities make decoder use necessary. For some operators, a decoder is not a shortcut. It is an accessibility aid that allows them to remain active and engaged. That use deserves respect.

At the same time, LICW's instructional experience leads to a clear and important observation:

<u>Routine reliance on decoders does not support the development of independent CW proficiency.</u>

Over time, instructors have consistently observed that when a decoder becomes the primary source of meaning, the student's auditory processing, continuity, recovery, and word-discovery skills do not fully develop. While this is not a formal study, it is a repeated and consistent outcome across many students and instructional settings.

For that reason, LICW's position should be stated plainly:

Decoders may be valid accessibility supports, occasional verification tools, and limited sending-feedback tools. They should not be treated as a normal or effective learning pathway for students whose goal is to develop independent CW skill.

When a decoder becomes the primary source of meaning, it displaces the core developmental loop: hearing Morse code as sound, remaining in the stream through loss, recovering instantly after misses, and reconstructing meaning from context.

Accordingly, for students seeking proficiency, routine reliance on a decoder should be strongly discouraged. A decoder may support participation, but it does not teach the brain to copy Morse code.

This principle applies across all developmental phases.

In the Path to Proficiency, students must learn characters as complete acoustic patterns without becoming visually dependent on printed output.

In the Path to Fluency, students must strengthen flow, reduce Time To Recognize, develop Instant Flow Recovery, and move toward word discovery and conversational comprehension.

In the Path from Fluency to Mastery, operators may use tools selectively under difficult conditions, but continued growth still depends on direct engagement with sound, continuity, and meaning.

WHEN DECODERS MAY BE OF VALUE

Decoders may provide legitimate value when used in a limited and clearly secondary role, or when required for accessibility.

A decoder may serve as an operating aid when the cost of an error is unusually high, such as confirming a callsign or number. It may reduce anxiety for a new operator during early on-air activity, provided it does not become the primary source of meaning.

In some cases, decoders may offer real accessibility support for operators dealing with health issues, fatigue, hearing limitations, weak signals, or adverse conditions.

Decoders may also be used as verification tools after a practice session or QSO. In that role, the student listens first, attempts copy internally, and then uses the decoder only to confirm uncertain items.

Decoders may also have limited value as feedback tools for sending practice. Used after a short sending exercise, a decoder can help a student identify whether spacing, rhythm, and character formation are clear enough to be recognized consistently. This use is different from relying on a decoder to receive Morse code. The decoder is not replacing listening or becoming the source of meaning. It is being used as a check on the student's transmitted code.

This use should remain limited and purposeful. The goal is clean, well-timed, human-readable CW, not merely machine-readable output. Instructor feedback and human copy remain the preferred standard, but a decoder can provide useful supplemental feedback during independent sending practice.

Used in these ways, the decoder functions as an aid rather than a substitute.

POTENTIAL DOWNFALLS OF DECODER RELIANCE

The danger begins when the decoder shifts from secondary aid to primary source of meaning.

When students read printed decoder output while listening, attention is drawn away from sound and toward text. This weakens auditory pattern recognition and interrupts the development of flow.

A second danger is dependency. The student may appear to function well only under conditions where the decoder is effective.

A third danger is the loss of training stimulus. Missing, staying in the stream, recovering, and reconstructing meaning are not failures. They are the mechanisms through which proficiency develops.

When those mechanisms are bypassed, development slows or stops.

INSTRUCTOR GUIDANCE

Instructor tone matters. Students should not be shamed, and members with accessibility needs should be treated with care and respect.

At the same time, instructors should be clear and direct about the academic impact of decoder use.

Useful instructor language includes:

- “A decoder is a tool, not a moral issue.”
- “If a decoder helps you stay on the air, that matters.”
- “If your goal is to build independent skill, it helps to do as much of the listening work as you can yourself.”
- “Missing is not failure. It is part of the learning process.”
- “Your job is to stay in the stream.”
- “Use a decoder as a check, not as a crutch.”
- “If the decoder is doing the receiving work, your brain is losing repetitions.”
- “A decoder may help check your sending, but the goal is clean, human-readable CW.”

This framing keeps the emphasis on learning, growth, and long-term development.

CONCLUSION

Decoders will continue to become more common and more capable.

LICW should not ignore them, shame their use, or pretend that they have no value. For some members, they provide meaningful accessibility support. In limited circumstances, they may also help confirm uncertain copy or provide supplemental feedback on sending.

However, decoders should not be promoted as a normal learning pathway for students whose goal is independent CW proficiency, fluency, and mastery.

The LICW Method depends on direct engagement with Morse code as sound. Students must learn to hear the code, remain in flow, recover from misses, tolerate uncertainty, and construct meaning without relying on printed output.

A decoder may assist an operator, but it cannot replace the learning process.

ACADEMIC EVALUATION OF NEW INSTRUCTIONAL TOOLS AND IDEAS

PURPOSE

This section defines how LICW Academics should evaluate new instructional tools, practice resources, teaching ideas, and member-developed learning aids. Its purpose is to ensure that LICW remains open to useful innovation while preserving the instructional principles that support real Morse code proficiency, fluency, and mastery.

This section does not address general technology governance, infrastructure, platform selection, security, hosting, permissions, or club operations. Those matters belong within the club's broader technology and administrative structure. The focus here is academic: whether a proposed tool or idea supports the LICW Method and improves student learning, instruction, or the member experience.

BACKGROUND

Instructional tools and learning resources continue to evolve rapidly. Artificial intelligence, AI-assisted development tools, automation platforms, and web-based learning applications now make it possible for instructors, students, and members without formal software-development backgrounds to create useful prototypes, practice tools, and learning resources.

This creates important opportunities for LICW. Good ideas may come from members who understand the student experience directly, from instructors who see recurring learning challenges, or from volunteers who recognize a way to make practice, class preparation, communication, or student support more effective.

At the same time, new tools should not be adopted simply because they are new, convenient, or impressive. Some may support the LICW Method, while others may unintentionally weaken it by encouraging visual decoding, passive learning, overreliance on transcripts, excessive automation, reduced live interaction, or a focus on measures that do not reflect real fluency.

For that reason, LICW Academics should remain open to new ideas while evaluating them carefully. New tools and ideas should be welcomed,

examined, tested where appropriate, and judged by their effect on learning, instruction, and the member experience.

LICW ACADEMIC POSITION

LICW Academics should remain open and welcoming to new instructional ideas, including those made possible by artificial intelligence and other emerging technologies.

The central question for LICW Academics is not whether a tool is traditional or new. The central question is whether it helps students develop sound-first recognition, flow, continuity, recovery, real-time comprehension, CW fluency, and eventual mastery in a manner consistent with the LICW Method.

A new instructional tool, practice resource, or teaching idea should be welcomed for consideration when it appears to:

- Support sound-first learning
- Strengthen flow, continuity, recovery, and real-time processing
- Help students practice more effectively between classes
- Improve accessibility or reduce barriers to participation
- Improve instructor effectiveness
- Support student confidence, engagement, and persistence
- Reinforce live instruction rather than replace it
- Improve the overall student or member experience

A tool or idea should be approached with caution when it appears to:

- Encourage visual, mnemonic, or analytical decoding
- Replace listening rather than develop auditory processing
- Reduce the importance of live instruction and real-time feedback
- Create privacy concerns or capture student participation without clear authorization
- Overemphasize speed, accuracy scores, or other measures at the expense of flow and comprehension
- Encourage passive learning rather than active practice
- Add complexity without improving learning or member experience
- Conflict with established LICW instructional principles

ROLE OF THE INSTRUCTOR MEETING

The regular instructor meeting is an appropriate place to introduce, demonstrate, and discuss new instructional tools or academic ideas.

LICW instructors are an especially valuable review and test group because instructors understand the LICW Method, observe student progress directly, and can evaluate whether a proposed tool supports or conflicts with the club's instructional principles.

When appropriate, new ideas may be introduced first as demonstrations, limited trials, or instructor-reviewed prototypes before being recommended more broadly to students or members. This allows LICW to encourage creativity while preserving academic consistency.

ACADEMIC EVALUATION QUESTIONS

LICW does not need a rigid approval process for every idea. However, tools or resources that may affect instruction, curriculum, student practice, accessibility, privacy, or official LICW instructional recommendations should be evaluated thoughtfully before broad use.

Useful questions include:

- What learning problem does this tool or idea address?
- Does it support the LICW Method?
  Does it strengthen sound-first learning, flow, recovery, or real-time comprehension?
- Does it help students practice more effectively?
- Does it improve the student, instructor, or member experience?
- Does it protect student privacy and class trust?
- Does it reinforce live instruction rather than replace it?
- Does it avoid visual, mnemonic, or decoder-like shortcuts that interfere with auditory processing?
- Is it suitable for limited testing before wider use?
- If adopted, who will maintain it, explain it, and keep it aligned with LICW academic practice?

The goal is not to slow innovation. The goal is to ensure that innovation is purposeful, sustainable, and aligned with LICW's long-term academic objectives.

CONCLUSION

LICW should remain a learning organization. The club should be open to new instructional tools, new academic ideas, and new contributors, especially as technology makes it easier for members to create resources that may benefit students and instructors.

At the same time, LICW should evaluate instructional innovation through the lens of the LICW Method. New tools should be welcomed when they improve learning, support instructors, strengthen accessibility, or enhance the member experience. They should be modified or declined when they conflict with the principles that support real Morse code proficiency, fluency, and mastery.

The best path is neither resistance to change nor novelty for its own sake. The best path is thoughtful academic experimentation guided by the LICW Method.

PRESERVING THE LICW METHOD THROUGH FUTURE CURRICULUM CHANGES

PURPOSE

This section defines how the LICW academic method should be preserved over time while allowing for thoughtful, evidence-based evolution. It provides a set of principles for evaluating future curriculum changes so that the program can improve without drifting away from the principles that make it effective.

BACKGROUND

LICW has developed its instructional model through years of classroom experience, observation, and refinement. Many of its core practices - flow-based learning, sound-first recognition, continuous curriculum structure, and communication-driven instruction - have proven effective across a wide range of students.

As the club grows and leadership evolves, there will be opportunities and pressures to modify the curriculum, adopt new tools, or align with external practices. Some of these changes may be beneficial. Others may introduce unintended consequences.

Without a clear set of principles, well-intentioned changes can gradually alter the instructional model, leading to inconsistency, reduced effectiveness, and loss of institutional knowledge.

For that reason, it is important to define not only what LICW does today, but how future changes should be considered.

FOUNDATIONAL PRINCIPLES

The LICW curriculum may evolve in structure, delivery, and supporting tools. However, the academic method described in this guide rests on several foundational principles that should be understood before significant changes are made.

The objective is not to bind future leaders to every current practice, but to ensure that future changes are made with awareness of the instructional principles, classroom experience, and student outcomes that shaped the LICW Method.

CORE PRINCIPLES THAT SHOULD NOT BE ALTERED WITHOUT STRONG EVIDENCE

The following principles form the foundation of the LICW instructional model. They should not be altered without clear, consistent, and long-term evidence that a proposed change improves student outcomes without introducing unintended consequences.

- Sound-first learning, with no dot/dash decoding and no visual or mnemonic character-learning pathway
- Flow-based development
- Continuous curriculum (no fixed-length proficiency courses)
- Live instruction with real-time feedback
- Communication-driven learning

These principles are interdependent. Changes to one may affect the effectiveness of others. For that reason, they should be considered collectively when evaluating proposed modifications to the curriculum.

APPROACH TO FUTURE CHANGES

Innovation is not only permitted, but expected. LICW has always improved by observing students carefully, learning from experience, and being willing to adjust when a better path becomes clear. Future curriculum changes should continue in that spirit: open to new ideas, grounded in evidence and student outcomes, and aligned with the principles that make the LICW Method effective.

At the same time, not all changes are beneficial. Some practices that appear helpful in the short term may conflict with long-term skill development.

For that reason, proposed changes should be approached deliberately and evaluated within the context of the entire instructional model.

EVALUATION AND ADOPTION OF CURRICULUM CHANGES

Significant curriculum changes should be approached deliberately and evaluated over time before broad adoption.

As a general practice, proposed changes should be:

- Discussed among senior instructors and leadership to ensure alignment with LICW principles
- Observed across multiple classes and instructors to confirm consistency of effect
- Evaluated over time based on student performance and long-term outcomes before being incorporated into the curriculum

This approach helps ensure that changes are not driven by isolated experiences or short-term results, but by consistent and repeatable improvements in student development.

EVALUATION CRITERIA

Before adopting a change, instructors and curriculum leaders should consider:

- Does the change support sound-first recognition, or does it encourage analytical decoding?
- Does it promote continuity and flow, or does it interrupt or fragment the learning process?
- Does it reinforce communication and real-world usage, or does it move learning toward abstraction?
- Does it reduce or increase reliance on tools that bypass auditory processing?
- Does it align with observed student success over time?
- Does it introduce short-term gains at the expense of long-term development?

Changes that conflict with these principles should be approached with caution, even if they appear effective in limited contexts.

COMMON SOURCES OF DRIFT

Instructional drift often occurs gradually and with good intentions. Common sources include:

- Adopting widely used external practices without evaluating their alignment with LICW principles
- Modifying instruction in response to short-term student frustration
- Introducing tools or techniques that simplify early learning but weaken long-term outcomes
- Emphasizing measurable results, such as speed, over the underlying

skills that support real proficiency

Over time, these changes can accumulate and alter the instructional model in ways that are not immediately apparent.

ROLE OF OBSERVATION AND EXPERIENCE

LICW's method is grounded not only in historical research, but in continuous observation of student performance.

Future changes should be informed by:

- Direct classroom experience
- Long-term student outcomes
- Patterns observed across instructors and levels

A single class, cohort, or short-term result should not drive broad curriculum changes. The emphasis should remain on consistent, repeatable outcomes over time.

USE OF ATTENDANCE DATA AS AN ACADEMIC QUALITY INDICATOR

Attendance data is an important tool for evaluating the health, usefulness, and appropriate sizing of LICW academic offerings.

Attendance should not be treated as the only measure of class quality. A low-attendance class is not automatically a poor class, and a high-attendance class is not automatically a better class. However, attendance trends can provide useful information when considered over time and in context.

LICW should use attendance data to help determine whether academic offerings are properly aligned with student needs, level demand, instructor availability, time slots, and curriculum priorities. Patterns in attendance may indicate that a class is meeting a strong need, that a time slot is difficult for students, that the class description is unclear, that the offering overlaps too closely with another class, or that the class may need support, clarification, adjustment, or review.

Attendance data is most useful when viewed as a trend rather than as a single measurement. A temporary drop in attendance may reflect holidays,

seasonal travel, competing club activities, or normal variation. A sustained pattern, however, may warrant closer examination.

The ideal class size also differs according to the type and purpose of the class. Some classes are most effective with smaller numbers. For example, a dedicated sending class may work best with approximately six students, allowing each student enough time to send and receive meaningful instructor feedback.

Other classes benefit from larger participation. As students move into higher levels, larger classes can provide more varied listening experiences, a wider range of sending styles, and more natural conversational energy. In many Intermediate and Advanced classes, a larger group may strengthen the learning environment, provided the instructor can still maintain focus, participation, and useful feedback. At the upper end, approximately 18 to 20 students may be a healthy and effective class size for certain higher-level offerings.

Attendance data should therefore be used to right-size classes, not simply to maximize numbers. The goal is to provide the right class, at the right level, at the right time, with the right number of students for the instructional purpose being served.

Instructors and curriculum leaders should be attentive to attendance patterns and willing to ask practical questions:

- Is this class scheduled at a time students can reasonably attend?
- Is the class serving a clear academic purpose?
- Is the class description accurate and understandable?
- Is the class too small, too large, or appropriately sized for its purpose?
- Are students returning over time?
- Does the class support progression within the LICW Method?
- Does the attendance pattern suggest a need for instructor support, schedule adjustment, consolidation, expansion, or redesign?

Attendance data should be used with judgment and care. It should inform conversation, not replace it. When attendance raises concerns, the appropriate response is not assumption or criticism, but inquiry: review the class purpose, speak with the instructor when appropriate, consider student needs, and determine whether any adjustment would better serve the curriculum.

Used properly, attendance data helps LICW remain responsive without becoming reactive. It allows the club to preserve strong offerings, right-size underused ones, identify emerging demand, support instructors, and ensure that academic resources remain aligned with student learning and the long-term health of the LICW Method.

ROLE OF INSTRUCTOR JUDGMENT

Instructors are encouraged to apply judgment, adapt to student needs, and contribute to the evolution of the program.

However, that judgment should operate within a shared set of principles.

Individual variation in style is appropriate. Variation in method should be considered carefully, particularly when it affects foundational elements of the curriculum.

When in doubt, instructors should favor consistency with established principles and seek discussion before adopting significant changes.

ROLE OF INSTRUCTOR SELECTION

Preserving the LICW Method begins before instructor training. It begins with the selection of instructors who are likely to teach in a manner consistent with LICW's culture, academic principles, and student-centered approach.

LICW values CW ability, but raw CW skill alone is not the primary qualification for instruction. The strongest instructors are not necessarily the fastest operators or the most technically accomplished CW practitioners. They are the instructors who can meet students where they are, explain ideas clearly, encourage without pressuring, correct without discouraging, and help students remain engaged through frustration, missed copy, plateaus, and uncertainty.

For that reason, instructor selection should place high value on:

- Empathy
- Patience
- Relatability
- Humility
- Clear and encouraging communication
- Sound judgment

- A student-centered attitude
- A genuine desire to give back
- Willingness to learn and teach within the LICW Method

These qualities matter because LICW instruction is not simply the transfer of CW knowledge from a skilled operator to a less experienced student. It is a relationship of encouragement, guidance, patience, and trust. Many of LICW's best instructors are people who were helped by the club, experienced the value of that care, and developed a desire to offer the same support to others.

This service-minded cycle is one of LICW's greatest strengths. Members receive care, encouragement, and guidance from LICW instructors, and that experience often creates a desire to give back. It is part of what LICW sometimes describes informally as its "secret sauce."

That desire to give back is often a better starting point for instructor selection than raw operating ability alone. CW skill can continue to grow. The LICW Method can be taught. But empathy, patience, gratitude, and a genuine desire to help other students succeed are essential qualities that cannot be assumed merely from a person's code speed or operating experience.

Instructor selection should also recognize that LICW has its own teaching culture and academic method. Bringing in an experienced CW operator or instructor from outside LICW is rarely successful unless that person first spends meaningful time engaging with the club's culture, curriculum, terminology, and instructional philosophy.

Outside experience can be valuable, but it does not automatically transfer into LICW instruction. Operators who learned or taught through visual, mnemonic, speed-centered, accuracy-centered, or highly rigid methods may naturally return to those methods when teaching, especially when students struggle. That can create instructional drift even when the instructor's intentions are good.

For that reason, prospective instructors should first become familiar with LICW as students, members, observers, assistants, or active participants in the instructor community before being asked to teach. They should understand not only what LICW teaches, but why it teaches that way.

The goal of instructor selection is not to find perfect instructors. The goal is to identify people who are student-centered, open to learning the LICW

approach, aligned with the LICW Method, and motivated by a genuine desire to help preserve the club's culture of kindness, patience, encouragement, and sound-first learning.

ROLE OF INSTRUCTOR TRAINING AND QUALIFICATION

After appropriate instructor selection, the preservation of the LICW Method depends on the consistent preparation and ongoing development of instructors.

Instructor training is one of the main ways LICW's teaching principles are shared, reinforced, and preserved across the club.

For that reason, instructor qualification should include:

- Demonstrated understanding of LICW instructional principles
- Ability to apply sound-first, flow-based teaching methods
- Familiarity with curriculum structure and progression
- Ability to recognize and correct common student errors
- Alignment with LICW instructional philosophy and expectations

Initial qualification is only the starting point.

Ongoing instructor development is equally important and should include:

- Continued observation of classes and instructional practices
- Periodic review and reinforcement of LICW teaching methods
- Opportunities for feedback, discussion, and refinement
- Exposure to updated curriculum guidance and appendices

Without ongoing reinforcement, even experienced instructors may gradually revert to familiar but inconsistent methods, particularly when responding to student frustration or external influences.

Instructor training therefore serves two essential functions:

- Initial alignment with the LICW Method
- Ongoing protection against instructional drift

For academic continuity, this is critical. Curriculum can be documented, but it is ultimately delivered through instructors. Consistency in instructor preparation ensures consistency in student experience.

For this reason, instructor training and qualification should be treated as an integral part of the LICW academic system, not as a separate or administrative function.

ROLE OF INSTRUCTOR MEETINGS AND CONTINUING ALIGNMENT

Regular instructor meetings are an essential part of preserving LICW's academic culture and maintaining alignment across LICW instructors.

LICW's bi-weekly instructor meetings provide a forum for discussing curriculum development, instructional practices, student needs, class operations, and emerging issues. All instructors are welcome to attend, and participation is encouraged as part of continuing instructional development.

These meetings also help preserve continuity across a large and distributed teaching environment. They allow instructors, moderators, and media developers to hear the same guidance, understand the reasoning behind changes, and remain connected to the broader academic direction of the club.

Unlike regular academic classes, instructor meetings may be recorded. The purpose of recording these meetings is not student instruction, but institutional continuity. Recordings ensure that instructors, moderators, and media developers who cannot attend live still have access to the discussion, guidance, and context needed to remain aligned with LICW Methods and expectations.

In this way, instructor meetings serve both a cultural and academic function. They reinforce shared purpose, support consistency, and help ensure that the LICW Method is carried forward with clarity and continuity.

CONCLUSION

Preserving the LICW Method does not mean resisting change. It means ensuring that change is purposeful, informed, and aligned with the principles that support long-term student development.

The goal is to maintain an academic program that continues to improve while remaining true to its core instructional philosophy. That continuity depends not only on written curriculum, but also on instructor preparation, continuing alignment, shared discussion, and a culture of thoughtful improvement.

Future instructors, moderators, media developers, and curriculum leaders are encouraged to build on this foundation with experience, judgment, and openness to better methods, while preserving the principles that allow students to develop real Morse code proficiency, fluency, and mastery.