



# The Efficacy of Text Message Courses for Corporate Learning and Development

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# Introduction

This white paper focuses on how text message-based learning can make workplace education more accessible and effective by employing recent research on microlearning and the spaced learning model.

There are limitless ways to teach with text, so in this paper we'll focus on studies that closely model the Arist method of text message learning, in which learners receive one text per day at a self-selected time, with about 1200 characters per text.


# Inputs and Outputs in Corporate Learning

Across corporate learning and training, Chief Learning Officers, VPs of Learning and Development and eLearning developers are tasked with creating training materials to educate and engage a large workforce at scale.

In this paper, we will focus on medium to large enterprises with greater than 1,000 employees who use widespread learning systems. Typically, learning leaders will use Learning Management Systems, which are platforms either built in house by the organization or customized from a company specializing in Learning Management Systems. These systems are used to create or input content and measure analytics as learners progress through coursework.

In a flagship study measuring the cost of developing an hour of eLearning by Karl Kapp and Robyn Defelice, learning and development practitioners were surveyed to measure the cost of creating training materials against the types of training they were building.

Kapp and Defelice categorized four different levels of eLearning, differentiated by the technical capability and intensity of the course, and measured the average time and cost of training across all four:



*"[Level 1 eLearning] is passive e-learning where the learner acts simply as a receiver of information.*

*[Level 2 eLearning] is defined as limited interactivity, with the learner offering simple responses to instructional cues.*

*[Level 3 eLearning] has complex interactions that requests the learner to make multiple and varied responses to cues.*

*[Level 4 eLearning] uses real-time interactions create life-like sets of complex cues and responses."*

	<i>Average time (hrs) to create an hour of eLearning</i>	<i>Average total time (hrs) to create eLearning material</i>
<i>Learner is simply a receiver of information</i>	42	3693
<i>Learner offers simple responses to instructional cues</i>	71	6266
<i>Learner has complex interactions, varied responses</i>	130	6864
<i>Learner has real time interactions</i>	143	2997

The model of text message learning examined is classified as level 2 eLearning, where learners receive information and give short form responses. 49% of learning and development practitioners surveyed are involved with creating level 2 eLearning. The study concluded that it takes ninety to two hundred and four hours and \$10,000, on average, to produce an hour of eLearning content. Using templates, instructional designers could develop an hour of level 2 eLearning in an average of 71 hours as of 2017.

Additionally, because these trainings are created primarily via video, it is difficult for instructional designers to adapt content in a subject area in order to keep information relevant. In terms of outputs, learning leaders are tasked with measuring how learning and development programs contribute to the metrics prioritized by the entire organization, most commonly revenue and employee growth and retention.

For this paper, we'll focus on the effectiveness of learning technologies, measured by course completion rates, response rates, information retention rates, and qualitative feedback from users on the overall learning experience, all of which have been proven to build more lucrative teams and retain employees when improved in learning initiatives.

# The Limitation of Current Popular Learning Solutions

Across corporate learning today, video-based coursework is incredibly popular. According to Brandon Hall's Employee Engagement Pulse Survey, 95% of companies are using video training in some form as a supplement to their current employee training. However, extensive studies have shown the limitation of video based coursework, both across course completion rates and information retention.

A study by Sara Isabella de Freitas, John Morgan and David Gibson published by the British Journal of Educational Technology cites, "High attrition rates have been problematic for wider uptake of online courses. The literature has also been clear about pointing to the high 'dropout' rates associated with MOOCs, with around 7-10% completing the courses." The paper also cites Stanford University's online seminars on Artificial Intelligence, where 160,000 students signed up and only a few thousand ended up completing the course. While many students may have had an initial interest in the subject, most unenrolled shortly after beginning the extensive coursework.

One important item to note is that, when students are "verified" (fully bought-in to the course), these completion rates can go up to 46%.

**95%** of companies are using video training

is the average completion rate of MOOCs **7%**

Low course completion rates are commonplace both in academic environments and with courses offered to the general public. A 2019 article in Science Magazine by Justin Reich and Jose Reiperez-Valiente, a director and postdoctoral associate at MIT, outlines the course completion rate issue further. From 2012 to 2018, across online courses taken on edX and Coursera among 5.63 million learners and 12.67 million registrations, just over three percent of learners completed courses.

This figure was from 2018, and was lower than completion rates of four and six percent seen in previous years, suggesting that MOOC completion rates aren't just low but are decreasing. These courses were open to both students and working professionals, and covered a wide variety of topics in literature, mathematics, and skill development.

# Specific to Workplace Learning

*"The #1 challenge for talent development is getting employees to make time for learning"*

*"Trend #4 - If employees can't find the time to learn, reduce the friction. Meet them on platforms they're already using with messages that align to their on-the-job needs and professional aspirations"*

Specific to workplace learning, LinkedIn's 2018 Learning Report outlines the top reasons for low completion rates in a corporate environment.

The top reason for failing to complete a course was timing, with 44% of learning professionals citing the time to complete a course as a reason for low completion in online trainings.

Additionally, 32% cited a limited budget as an issue for creating additional online learning. These studies represent a lack of adequate tools and resources for improving employee engagement across online learning.



2. Eubanks, Ben. "95% Of Companies Use Video for Learning." Brandon Hall Group, 2 Sept. 2015  
3. Freitas, Sara Isabella de, et al. "Will MOOCs Transform Learning and Teaching in Higher Education? Engagement and Course Retention in Online Learning Provision." 8 Apr. 2015

4. Reich, Justin, and José A. Ruipérez-Valiente. "The MOOC Pivot." Science, American Association for the Advancement of Science, 11 Jan. 2019  
5. "LinkedIn's 2018 Workplace Learning Report." Workplace Learning & Development Report 2018 | LinkedIn Learning

# Early Outcomes of Text Message Learning

The first study performed on the effectiveness of full coursework via text message was performed by Arist Holdings Inc., a text message learning company based in Massachusetts. In May of 2018, the Arist team surveyed 100 students at UCLA and Babson College, working with professors to build coursework in entrepreneurship. This coursework was mainly focused on concept definition of terms related to venture capital funding, innovation, and business models of startups.

Students received one text message of between 800 and 1600 characters in length each day at a self-selected time and were asked to respond every few days with basic responses to show understanding. This text message course lasted for thirty days and 92% of those who signed up for the course completed it. 8% did not complete the course and none of the students opted out of receiving the texts that were automatically being delivered to their phones.



When surveyed,

**89%** of students found the experience enjoyable

of students would take an additional course

**93%**

**70%** of students would prefer a text message-based course

The team surveyed students and learned that users enjoyed opting into their own time, felt spammed when receiving more than 1-3 texts per day, and preferred a length of two screen lengths, or about 1,200 characters. Further user interviews revealed that 2-3 weeks was an optimal course length.

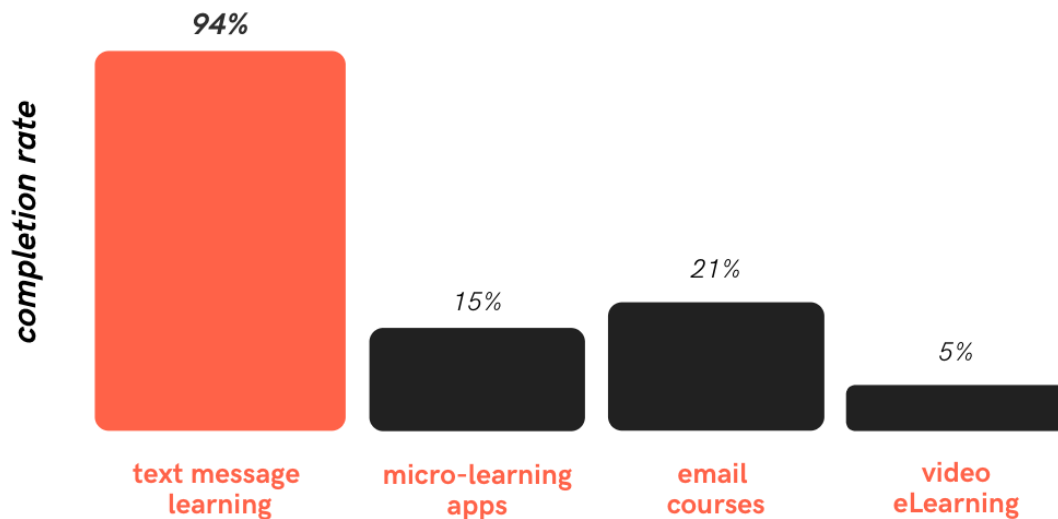
For the learning designers, course creation took less than a week and was nearly free to deploy to students. Given the expensive inputs and low satisfaction and completion rates of traditional corporate training, text message learning displayed strong applicability in training workforces.

# Workplace Studies of Text Message Learning

In later studies performed by the Arist team focusing solely on workplace learning, similar outcomes were discovered. The team worked with HR firms and corporate trainers to create courses in Architectural History, Mindfulness, Stress Management, Leadership, Public Speaking, and Harassment Prevention.

The courses varied in length and tone, with courses ranging from 5 days to

30 days in length, and assessments in the form of open-ended, short answer, and multiple choice questions delivered every three to eight days to learners' phones. Across 800 users comprising of executives, mid-level managers, entry level employees, and interns across several industries, taking courses on WhatsApp, Facebook Messenger, and SMS, the team saw 94% completion rates.





Completion rates were measured by employees opening each daily text and not unsubscribing. It's important to note that the WhatsApp medium required employees to respond each day before sending an additional message. Response rates, measured by answering a subject-related question when prompted daily, varied widely between 15% and 100%.

When surveying employees, the main difference in satisfaction was with the type of content offered and the level of interest with the content. The team noted in their findings that response rates were nearly 100% when the creator had an in-depth understanding of the teams' training needs, and could use common vernacular when creating the course. Out of the box courses, created for no specific audience, saw lower completion and response rates.

Although satisfaction across a variety of subjects was generally equal, the context in which employees signed up for a course could predict engagement with relative accuracy. Learners taking a mindfulness course, for example, were interested in being more mindful at work and nearly all users completed the course. Like any other learning medium, users need to have some basic interest in a subject to ensure positive outcomes.

However, even when users had demonstrated interest in a subject, completing a video course proved difficult due to a variety of barriers in the learning medium. Changing the learning medium to text message courses, which are designed to deliver learning content frictionlessly, made learning easy enough to complete for many learners.

Finally, completion rates and satisfaction scores were higher among courses that used a friendly and conversational tone, and many users noted this as a highlight in their experience. Across all courses, nine out of ten users enjoyed their text message learning experience.

# Models Explaining the Outcomes of Text Message Learning

**microlearning**

**spaced learning**

**deliverability**

The studies from the Arist team highlight measurably higher rates of learning satisfaction and completion, and a potential solution to the problems a lot of learning leaders face with the cost of creating new courses. While the completion rates of text message courses were high, their length is notably shorter than those of traditional video mediums. This can help explain the continued engagement with the medium, as users felt the amount of information was easier to handle.

The time in-between texts is also a potential reason for learner retention, with a text once per day allowing a user to reflect on the information. We can suspect automatically dripped content to play a role in engagement, only requiring users to log into a website in a single instance to activate a course. This eliminates the time to log into a platform daily, a common current practice, which could otherwise reduce engagement with a traditional LMS.

# Microlearning

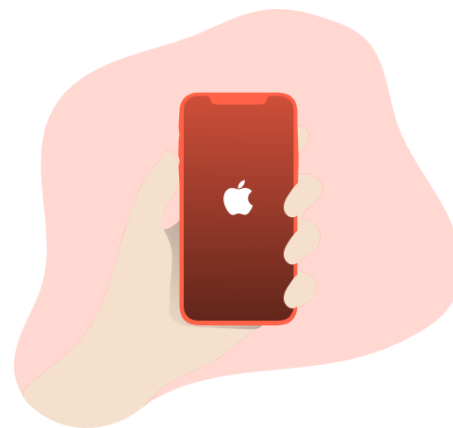
Compared to course length and high engagement metrics, text message learning closely follows many of the studies around microlearning, a growing trend in learning and development for workforce education.

In its simplest form, microlearning is a delivery format of content where users receive short form content over an extended period of time. In "Microlearning Case Study: Just-In-Time Information For Faster Learning", published in *eLearning Industry* in 2018, Asha Pandey explores microlearning and its use in formal and informal training, using a case study of microlearning to show an edge over traditional forms of digital learning.

She defines microlearning as short, bite-sized learning that is often two to five minutes long in each segment, and does not typically exceed seven minutes in length. Pandey also makes an important distinction that microlearning "is not 'eLearning lite', that is, a traditional eLearning course spliced into shorter nuggets, but it is designed to have an associated learning outcome. As a result, it can be consumed on its own or as a series of interconnected nuggets."

The case study runs instructional designers through a storytelling experience, where working professionals are given short bursts of information and then asked review questions to check retention. Learners scroll to reveal content and the periodic knowledge checks use a variety of multiple choice and open ended responses.

Pandey discovers that the use of microlearning nuggets were better received by learners, and encourages the use of microlearning in both formal and informal learning scenarios, both as a classroom or workplace aid and as standalone coursework.

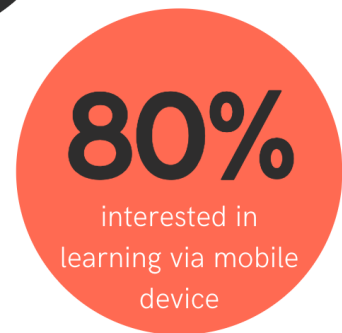


Pandey writes that microlearning programs typically see higher engagement than traditional programs given “delivery in wide-ranging, high impact visual formats, and its short run lengths”. She also expresses a professional opinion that microlearning will not replace all traditional eLearning, but will be commonplace in reinforcement because it is easier to update and redeploy, create in diverse formats, and engage with learners given the lower time constraints.

For text message learning, the Arist team saw nearly identical benefits, content structures, and time requirements for the end learner, categorizing text message learning as microlearning. This leads us to look into the efficacy of why forms of microlearning and short form content are as well received by learners as shown in early studies.

In "Microlearning: A Modernized Education System", a paper published in *Artificial Intelligence and Neuroscience* in 2016, Omer Jomah explored the advantages for microlearning. Jomah found similar engagement metrics and benefits as Pandey, and writes “The methods of micro learning are in line with the way that the learner’s brain naturally takes in information, so that the body does not get stressed-out.”

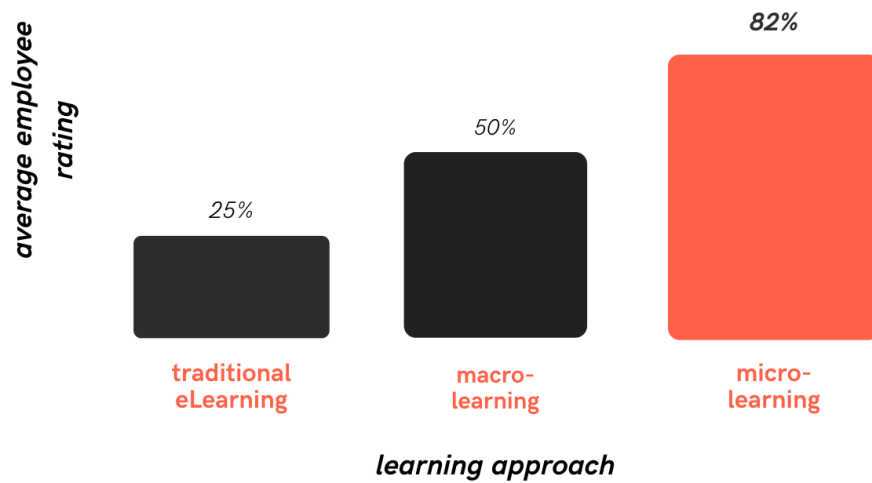
In a random sample of 100 college students and working professionals, Jomah found 90% of respondents welcomed a microlearning approach to learning, and 80% were interested in learning via electronic devices, compared to 75% for email, 72% for video clips, and 65% for images.



*This compares to 75% for email, 72% for video, and 65% for images*

When comparing microlearning to macrolearning and traditional learning, Jomah found 82% of users rated microlearning as holistic and user-friendly. This compared to just over 50% on average for macrolearning and less than 25% for traditional learning.

*Our learning approach is: holistic, user-friendly, easy to use*



Jomah also provides insights on the limitation of the medium, noting that microlearning is not useful when learners need to acquire complex skills and require constant back and forth for mastery of a subject.

The text message courses described by the Arist team take advantage of electronic mediums and use similar content approaches in tone and length to maximize user friendliness and simplicity, finding similar evidence for positive outcomes.

# Spaced Learning

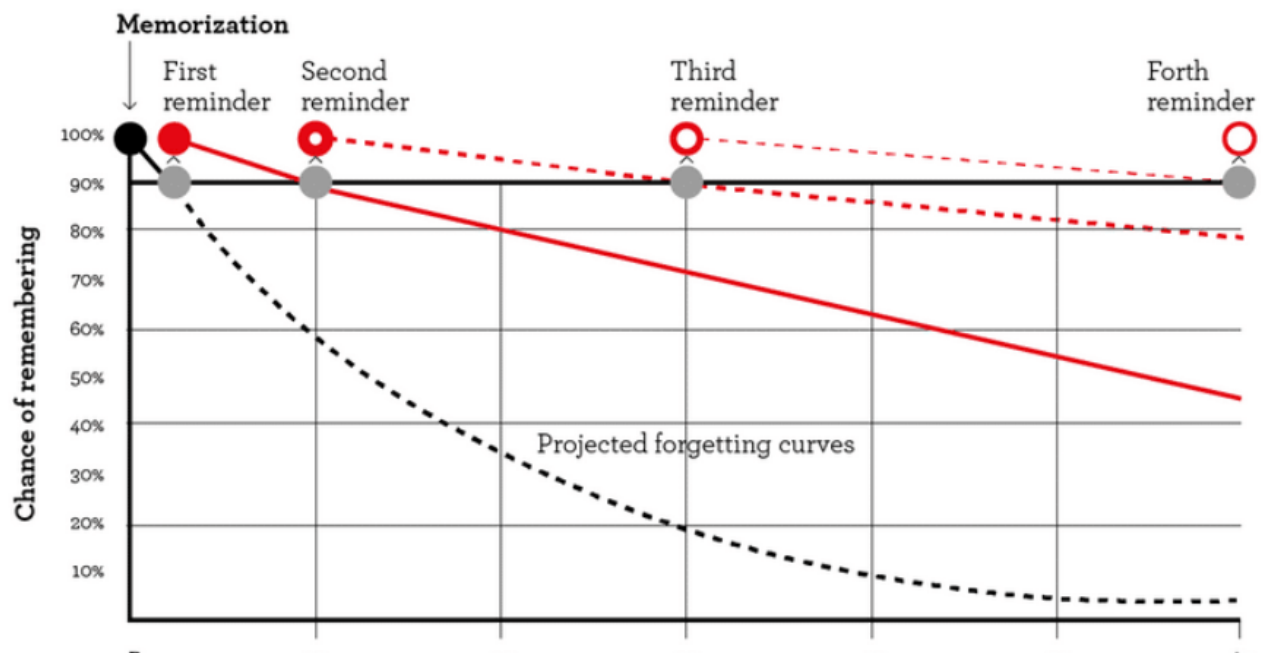
Spaced learning is the practice of refreshing users of prior content over an extended period of time.

In the context of text message learning, the spaced learning model also helps to explain higher rates of retention and reported satisfaction among end users.

In the article "The Spacing Effect: How to Improve Learning and Maximize Retention", a writer from *Farnam Street* (a thought leader in learning science) pulls from a variety of books and studies to make a case

for the effectiveness of spaced learning to improve learner retention and understanding, specifically focusing on corporate learners, who we can presume are roughly ages 25 to 65.

The article focuses heavily on the forgetting curve, or the rate at which learners forget things once they've received new information. After just an hour, learners will forget nearly 60% of delivered information. By using a spaced learning model, they see forgetting curves change drastically.



8. "The Spacing Effect: How to Improve Learning and Maximize Retention." *Farnam Street*, 31 Dec. 2018  
9. Lambert, Craig. "Learning by Degrees." *Harvard Magazine*, 27 Oct. 2009

After ten days of daily reminders, learners remember 90% of information. The author also explores recommendations for implementing spaced learning and retention. These include a schedule for information review, or systems in place to check the retention of learners throughout the process, and a means of storing information for later reference.

The author also discusses the use of a points system where learners can receive metrics and progress tracking and self-select review times. Referencing frameworks to use within spaced learning, an article published in Harvard Magazine by Craig Lambert in 2009 cites work on spaced education in training medical practitioners by Dr. B. Price Kerfoot, a surgeon and Harvard Graduate School of Education alumni.

Kerfoot developed a framework

explaining outcomes in spaced learning, breaking the psychology down into the spacing effect and testing effect. "The first principle is the spacing effect—'When you present and repeat information over intervals of time [as opposed to 'binges'], you can increase the uptake of knowledge.' [Kerfoot] explains. 'And it's encoded in ways that cause it to be preferentially retained.'

The second principle is the testing effect: 'When you present information in a 'test' format, rather than just reading it, long-term retention is dramatically improved.'" In the Arist tests, the team presented repeated information for standalone coursework and course reinforcement, and quizzed users on content through the medium. The spaced learning model helps explain a potential rise in information retention from the method used.

### *The Spacing Effect*

*"When you present and repeat information over intervals of time [as opposed to binges] you can increase the uptake of knowledge"*

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### *The Testing Effect*

*"When you present information in a 'test' format, rather than just reading it, long-term retention is dramatically improved"*

*Dr. B Price Kerfoot, Harvard Business Review*

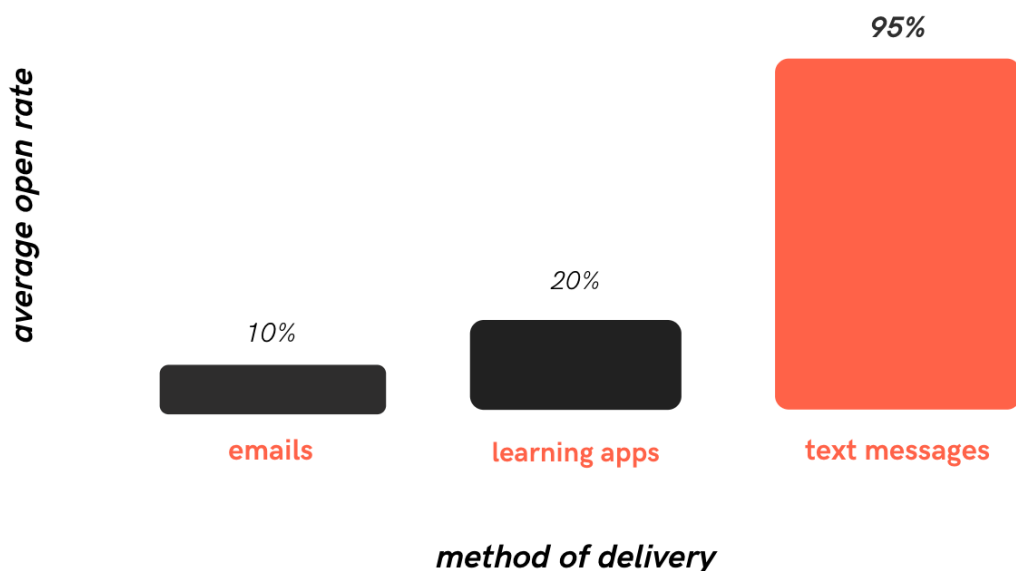
# Deliverability

*"99% of received text messages are opened and 90% read within three minutes of being received"*

Text message learning uses models of spaced learning and microlearning, yet still provides better outcomes in completion rates than microlearning apps and other short form applications. The main difference between these approaches is in the medium users engage with.

A study by Brian Suffoletto published

in 2015, Text message behavioral interventions: from here to where?, cites "99% of received text messages are opened and 90% read within three minutes of being received". This provides a significant edge to open rates of emails and apps, at roughly 10% and 20% respectively, and may help explain the high course completion rates.







# Conclusion

While text message learning is still a relatively new concept in its introduction to workforce learning, success in early pilots and studies in microlearning, spaced learning models, and deliverability of texts are promising for the tool as a learning medium.

On a fundamental level, employees need to desire learning in order to enjoy receiving information. However, the simplicity of text messages remove many of the barriers to engagement seen in traditional learning models. Furthermore, the use of short form content and repetition in coursework is optimal for reinforcing short form content, as opposed to expecting employee retention after a single learning session.

Factors such as tone, language, durability, and personalization can affect outcomes greatly, and the best practices of text message learning and variability in content, timing, frequency, and tone will remain an ongoing study.

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*The text message learning platform*