**Note: The following excerpts were from test files that companies have sent me in recent years. They don’t belong to the individuals/organizations whose documents I’ve edited. For formatting, I currently don’t have a comprehensive sample. Please feel free to send me a formatting test, as needed. Thank you.**

Sample Edit 1

Collaborative out-of-class learning, which was first introduced by David Koonts in the 1970s, has developed into one of the most respected teaching theories of today. Bandura’s (1977) social learning theory provides the theoretical basis for collaborative out-of-class learning and describes how individuals learn from one another through imitation and indirect experience. Collaborative learning (CL) occurs when two or more people learn or attempt to learn something together. The key terms in this definition are “two or more,” “learn something,” and “together” (Dillenbourg, 1999). Collaborative out-of-class learning has been widely used in the teaching of various subjects; it adopts different models, depending on the characteristics of the disciplines and courses involved. With the rise of the concept of *lifelong education*, learning is no longer limited to the classroom; instead, it can occur anytime and anywhere. Collaborative out-of-class learning has therefore become increasingly important. However, in the current situation of higher education in China, which is characterized by large class sizes and heavy teaching workloads, many questions remain regarding the provision of high-quality education and students’ performance evaluations in the context of collaborative out-of-class learning. Previous studies emphasize that peer and self-assessment can benefit students by helping them improve their critical thinking skills, assume greater responsibility for their own learning, increase their motivation, and learn from peers who are experiencing similar problems.

Sample Edit 2

Soil moisture is a key factor that affects the climate system. Changes in the spatial and temporal characteristics of soil moisture significantly influence the calculated evaporation and runoff, as well as the surface energy partitioned into latent and sensible heat. Research using general circulation models (GCMs), which incorporate land surface parameterization, has shown that there is strong feedback between soil moisture anomalies and climate. Soil moisture simulations could be highly useful in the fields of hydrology, meteorology, climatology, and agriculture.

Sample Edit 3

A cylindrical shell with sealing teeth is a type of structure widely applied in engineering, such as in advanced gas turbines, high-powered aircraft jet engines, and high-speed centrifugal separators [1]. Vibration is one of the most significant issues in analyzing cylindrical shell structures [2]. As experimental tests of actual structures are costly and time consuming, a dynamic similarity scaled-down model is used to predict prototype behavior. However, because of the unavailability of materials or of specified dimensions of members, using two or more length scales becomes necessary, resulting in geometric distortion.

Sample Edit 4

As is often the case when it comes to new technologies, legislation lags behind innovation. Either the law remains silent on the new technology, therefore not directly opposing it, or the law directly hinders the implementation of the innovation by prohibiting it implicitly or explicitly. The first scenario could result in the unregulated market introduction of the new technology, facilitating unbalanced risk distribution and opening the door to the self-regulation of the industry. The second scenario could imply that the law would create a direct end to the further development and implementation of the innovation.

For disruptive autonomous ship technology, the latter scenario and its corresponding implications hold true. As shipping is a heavily regulated sector, autonomous ships cannot escape the agenda of the public regulator if their future implementation is sought. More specifically, autonomous ship operations are not permitted under current laws and regulations. Existing legislation needs to be adapted for autonomous ships, mainly because they are unmanned, thereby opposing provisions requiring crew on board for navigation, safety and security, as well as contradicting stipulations involving environmental protection. Another important reason is that autonomous shipping, when implemented, presents a disruptive technology whose consequences have not yet been fully assessed and are expected to change over time following further technological developments. Nevertheless, the benefits gained from implementing autonomous shipping on a wide scale in Europe seem to outweigh the potential risks and uncertainties and have therefore urged the legislator to take action.

In contrast to maritime shipping, in which considerable work on regulatory adaptation has already been achieved, the inland shipping sector has not experienced a similar development. Apart from experimental legislation that allows real-environment testing, regulatory work with the purpose of either modifying existing provisions to make them conform to autonomous inland shipping or adopting new provisions to mitigate (newly) emerging risks remains limited. The reason for this relatively slow process is the unique public regulatory institutional structure in inland shipping compared with that in maritime shipping; the former consists of a multi-levelled regulatory landscape involving different supranational, regional and national authorities. The rules and regulations adopted by these authorities diverge in characteristics in terms of their binding or non-binding nature, their geographical application scope and their hierarchical importance throughout Europe. This also means that the unification of rules and regulations is less present in inland shipping, consequently making a unified approach to the regulation of autonomous inland ships generally more onerous.

Sample Edit 5

Before we proceed to the analysis of the metaphorical meaning of the business cycle, this section investigates the key propositions of the monetary theory of the business cycle, which is the theory linking the Stockholm and Austrian schools of economics. The pioneer of this theory is Knut Wicksell (1851–1826). Wicksell redefined monetary equilibrium in an attempt to clarify the transmission mechanism between money and prices. This redefinition led him to distinguish between the market rate and the natural rate of equilibrium. The natural rate of interest is the interest rate in which the supply and demand for loans are equal, assuming that all lending is done in terms of real capital goods. In the absence of money, the natural rate of interest should correspond to the expected yield on newly created capital. In reality, loans are expressed in terms of money, which may entail that the market rate of interest differ from the natural rate of interest. Therefore, the first condition for monetary equilibrium is that the market and natural rates of interest should be equal.

The second condition for monetary equilibrium is the stability of prices. Wicksell linked money and prices through a transmission mechanism. He focused on changes in the stock of money resulting from the creation of credit by banks. Wicksell’s monetary economy is a pure credit economy. The extra supply of credit pushes the market rate of interest below the natural rate of interest—an effect that does not directly cause prices to rise. The role of capital investment here is crucial. Wicksell stressed that entrepreneurs use the extra supply of credit to finance the purchase of capital goods. Cheap credit fuels their expectations of a profitable expansion of their productive capacities. However, their demand for productive resources drives up the prices of factor resources, spreading inflation throughout the economy. The initial expectations of entrepreneurs, who are now faced with higher costs, seem unmet. At the end of the period, though, entrepreneurs will surprisingly find that not only have the costs of production increased, but the money prices for their goods have also risen. Inflation is now a general phenomenon with a proportional increase in all factor and output prices, assuming that the money demand for final products rises in proportion to the increase in factor incomes.

Sample Edit 6

Abstract

The main performance degradation factor in the UWB system is intersymbol interference, which is the result of a long delay spread. To address this issue, we propose a simplified MMSE equalizer with a time reversal (TR) pre-filter, which is characterized by its focus on the symbol energy in the space–time domain. Using the TR pre-filter, we can shorten the tap size of the MMSE equalizer on the receiver side without BER performance degradation compared with that in the case of the full-tap MMSE equalizer.

# 1. Introduction

The UWB system has received significant attention as a short-range indoor wireless system because it facilitates a remarkable capacity increment by using a huge bandwidth. However, this system suffers from intersymbol interference (ISI), which is the result of a large bandwidth. To overcome this drawback, DS-CDMA RAKE receivers have been deployed, but this approach cannot resolve the increase in complexity on the receiver side.

Because of ISI and complexity issues, the time reversal (TR) technique, which was originally studied in the field of underwater acoustics, has been extended to the UWB system. The TR pre-filter is the time-reversed version of the channel impulse response (CIR) and acts as a transmit matched filter that addresses receiver complexity. It also provides a spatial and temporal focusing effect [1]. However, the TR pre-filter cannot eliminate ISI fully, so residual ISI degrades system performance.

In this study, we propose a simplified MMSE equalizer with the TR pre-filter to eliminate residual ISI. Considering the energy-focusing effect in the space–time domain, we can simplify the MMSE equalizer on the receiver side by using the shortened effective CIR, and achieve BER performance that is comparable to that of the full-tap MMSE equalizer.

# 2. Time Reversal and the Equalizer

For the TR, the transmitter uses the time-reversed complex conjugate of the CIR as the pre-filter. If we denote the CIR by h x (t), the pre-filter and the effective CIR are given by

|  |  |
| --- | --- |
|  | (1) |
|  | (2) |

where  indicates the convolution function, and  represents the normalizing factor to prevent power enhancement by the pre-filter. The effective CIR then becomes equivalent to the autocorrelation function of the CIR, which results in a focus on the symbol energy in the space–time domain. To examine the degree of focus, the signal-to-sidelobe ratio (SSR) parameter is introduced, which is defined as follows:

Sample Edit 7

Note: I was asked to **rewrite** the following ESL document as much as I can.

Original Text:

The term numeracy is a reasonable new term, which has disappeared and came back over time. Numeracy is feeling comfortable with using mathematics in our daily practical lives. It is also about having an ability to interpret and understand mathematical terms and ideas that could be presented to you. Numerate person could understand how mathematics is used as a way of communication (Cockcroft, 1982). “Mathematics is a universal language that is communicated through all cultures”’[[1]](#footnote-1). Math does not need to look at the real world as it looks into abstract constracts. whereas numeracy focusses on using mathematics in the real world. There is a relationship between math’s and numeracy; a two way relationship. Math’s is dependent upon numeracy. Math’s is a way to learn for numeracy whereas in the all the other areas they are using numeracy to build their learning.

As a teacher of any subject we have to teach numerecy. We need to look at what maths is required, be familiar with the math’s terminology, and actually do the mathematics. Mathematics is the most obvious subject area where numeracy is an essential skill to be able to grasp information and concepts to then further understand them and apply them to problem solving

Numeracy plays a major part in history. In history students need to understand concepts and terms in relation to time. This could be medieval, modern, and ancient. History pays a lot of attention to the past, present, and future and how things have changed over time. To understands concepts of time and date students would be using various things such as maps, timelines, calendars, reading different numeral. To work out time such as millennium, decade or year students will require measuring those periods of time. History also involves using graphs and tables. Through graphs they can recognize growth of immigration, decline of birth rates, etc. There is a large use of numbers in history through analyzing things such as population growth, percentages of casualties in war, number of immigrants, and life expectancy.. Thus they will be understanding change over time, using percentages, interpreting and drawing conclusions from statistical information, and using measuring through time. Thus in history numeracy plays an important role[[2]](#footnote-2).

According to ACARRA (2O11), ‘in history, students needs to be able imagine timelines and time frames to reconcile related events; and in English, deriving quantitative and spatial information is an important aspect of making meaning of texts” (22). This is how mathematics is liked to history.. A numerate person requires mathematic skills. Most importantly the confidence to use math’s, a positive disposition. The use of math’s in different learning areas such as history enriches learning. The mathematical skills that are required in history are calculating and estimating, recognizing and using patterns and relationships, using fractions, decimals, percentages, ratios, and rates, using spatial reasoning, interpreting and drawing conclusion from statistical information and using measurements. These skills will be developed through using math’s confidently, and in the world generally. The desire to use math`s is also very important. There needs to be familiarization of math terms, identify what math’s is needed, and reflect on the math’s that is used.

“Students learn to use scaled timelines, including those involving negative and positive numbers, as well as calendars and dates to recall information on topics of historical significance and to illustrate the passing of time” (ACARA 201I, pg. 3). Timelines are on of the major tools that are used in history. This mainly correlates with the second organizing element: recognizing and using patterns and relationships. Timelines is thus an effective way to see why what has happened over time, why it has happened. An example could be with year 6s using maps to explain routes, why these routes where effective. This led to students’ thinking about patterns of development in Australia. This would be using spatial reasoning as one of the numeracy elements.

**My Rewritten Version as per Instruction:**

The concept of numeracy is relatively recent. It is defined as the ability to understand mathematical terms and ideas and to use them comfortably in meeting the practical demands of life. Numerate individuals understand how mathematics is applied as a means of communication (Cockcroft, 1982). According to the South Australian Certificate of Education Board (2010), ‘mathematics is a universal language that is communicated through all cultures’.

While numeracy focuses on the use of mathematics in the real world, math involves abstract constructs that are not directly applicable to the real world. Nevertheless, these two concepts are highly interrelated. On the one hand, mathematics is dependent on numeracy, as information and concepts need to be grasped and understood in depth before they can be applied to problem solving. On the other hand, numeracy requires knowledge of math. A numerate person should have mathematical skills and, importantly, the confidence and positive disposition to use these skills in real life. In general, mathematical skills can be developed by confidently applying and regularly using them in the real world. The desire to use math is also very important. One needs to be familiar with math terms, identify the math concepts and skills required and apply these accordingly.

Mathematics is the subject area in which numeracy is obviously an essential skill, but other areas of learning also call for numeracy to enhance knowledge acquisition. Subject teachers thus need to teach numeracy. They should determine the math skills required in their subject areas, be familiar with mathematical terminologies and then do the actual math.

Let us take numeracy in the learning area of history as an example. History focuses on the past, present and future and how things have changed over time. In this subject, students need to understand historical events, concepts and terms in relation to time (i.e. years, decades or millennia), which could be modern, medieval or ancient. To do so, they must use various mathematical tools, such as timelines, maps, calendars, graphs and tables, and to read and interpret different numerals. This is consistent with what the Australian Curriculum, Assessment and Reporting Authority (ACARA; 2011) stated that students should ‘learn to use scaled timelines, including those involving negative and positive numbers, as well as calendars and dates, to recall information on topics of historical significance and to illustrate the passing of time’ (p. 3).

Timelines are among the major mathematical tools used in the subject area of history. Timelines are chronological arrangements of elements to help identify the patterns and relationships of such elements. The use of timelines is an effective way to see the events that happened over time and to understand the reasons why they occurred. According to ACARA (2011), ‘in history, students needs to be able imagine timelines and time frames to reconcile related events’ (p. 22). This is how mathematics is linked to history. The use of math in history enriches learning. Some of the mathematical skills that are required in history are calculating and estimating; recognising and using patterns and relationships; using fractions, decimals, percentages, ratios and rates; applying spatial reasoning; interpreting and drawing conclusions from statistical information; and using measurements.

Similar to timelines, maps are mathematical tools commonly used in the learning area of history. Maps show routes and help explain why these routes were developed. They allow learners to analyse different development patterns, with spatial reasoning included as one of the elements of numeracy.

Overall, through mathematical tools, valuable statistical information that is relevant to the study of history can be obtained, such as the growth of immigration and the decline in birth rates. Numbers are frequently used in history to measure and analyse constructs, such as population growth, number of war casualties, number of immigrants and life expectancy. Events and changes that occur over time can be better understood and interpreted using percentages and other statistical information, from which relevant conclusions can then be drawn. Indeed, numeracy plays an important role in history (Department of Education and Early Childhood Development, 2012).

1. SACE board 2010. [↑](#footnote-ref-1)
2. departments of education and early childhood development 2012 [↑](#footnote-ref-2)