

Creating a Culture to Restore Balance to Our Schools While Preparing Students for Their Future

Dr. Bill Daggett

Montana Learning 2025 Collegial Learning Network

March 29, 2023

SPN

Successful
Practices
Network

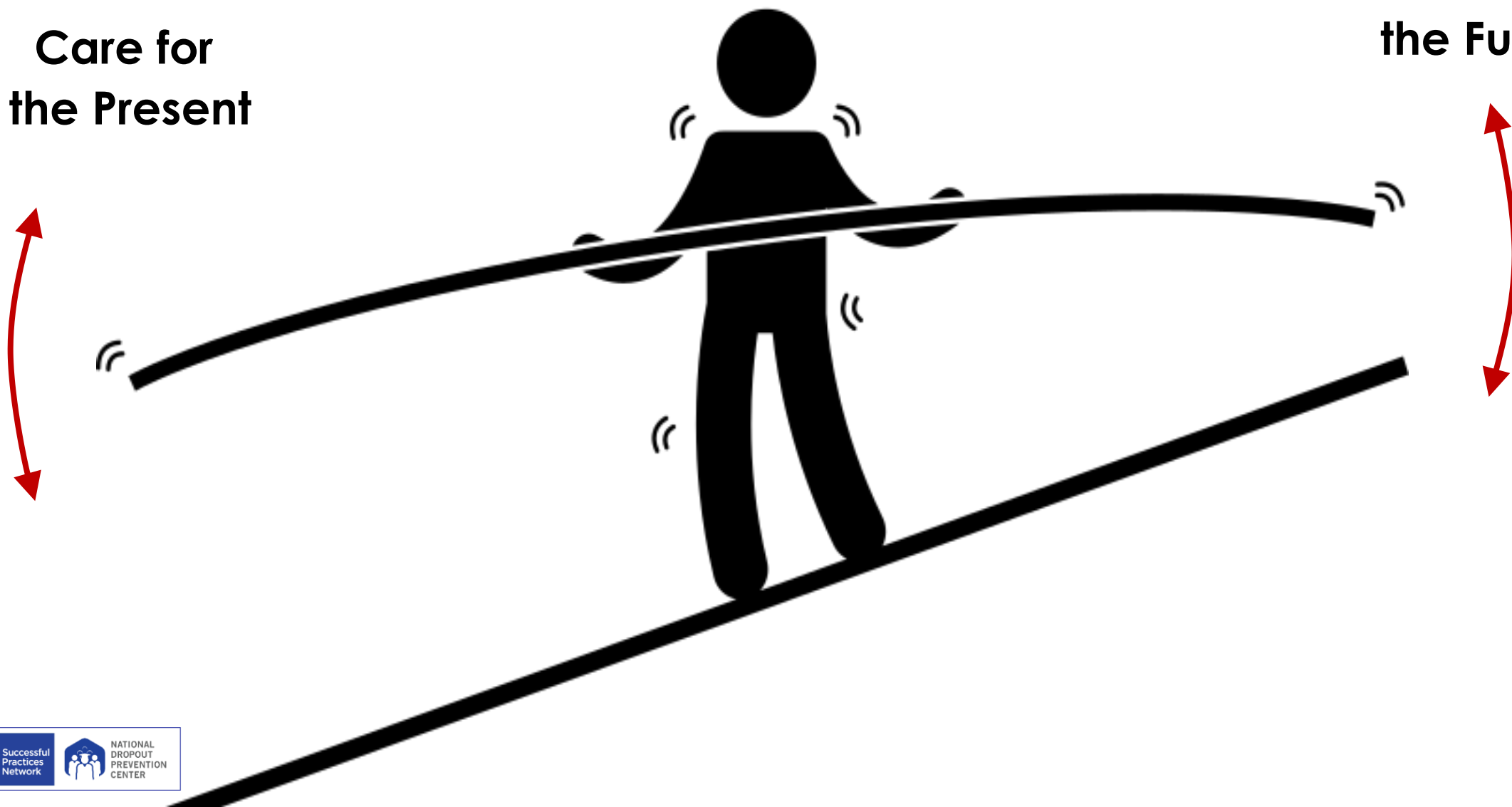


NATIONAL
DROPOUT
PREVENTION
CENTER

From Stabilizing to Transitioning the System

Care for
the Present

Enable
the Future



Where are you on this Journey and where do you want to be in 2 years?

Comments and Questions

Webinars Series

- March 16 – Focusing on Mental Health Supports for Students and Staff Using Community Partnerships and Best Practices

Webinars Series

- March 16 – Focusing on Mental Health Supports for Students and Staff Using Community Partnerships and Best Practices
- Today - Creating a Culture to Restore Balance to Our Schools While Preparing Students for Their Future

Webinars Series

- March 16 – Focusing on Mental Health Supports for Students and Staff Using Community Partnerships and Best Practices
- Today - Creating a Culture to Restore Balance to Our Schools While Preparing Students for Their Future
- April 13 – The Why, What and How for Transformational Resdesign of Instruction and Assessment in the Nation’s Most Rapidly Improving Districts

Webinars Series

- March 16 – Focusing on Mental Health Supports for Students and Staff Using Community Partnerships and Best Practices
- Today - Creating a Culture to Restore Balance to Our Schools While Preparing Students for Their Future
- April 13 – The Why, What and How for Transformational Resdesign of Instruction and Assessment in the Nation’s Most Rapidly Improving Districts
- April 27 – Preparing ALL Students to be Career and Life Ready

Culture Trumps Strategy

You can not change faster than
the rate of readiness and trust.

Pressing Challenges

Pressing Challenges

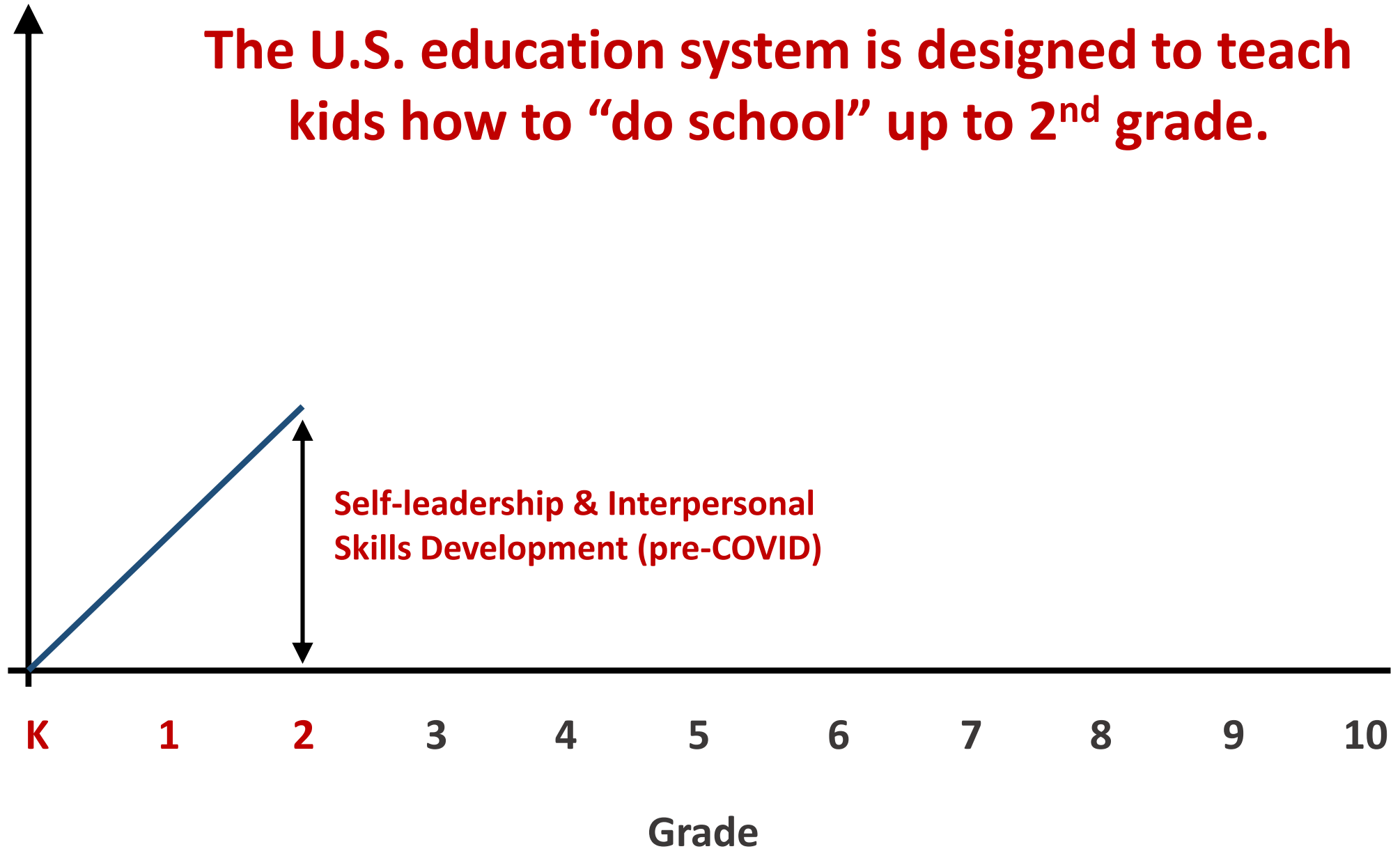
➤ Learning Loss

Pressing Challenges

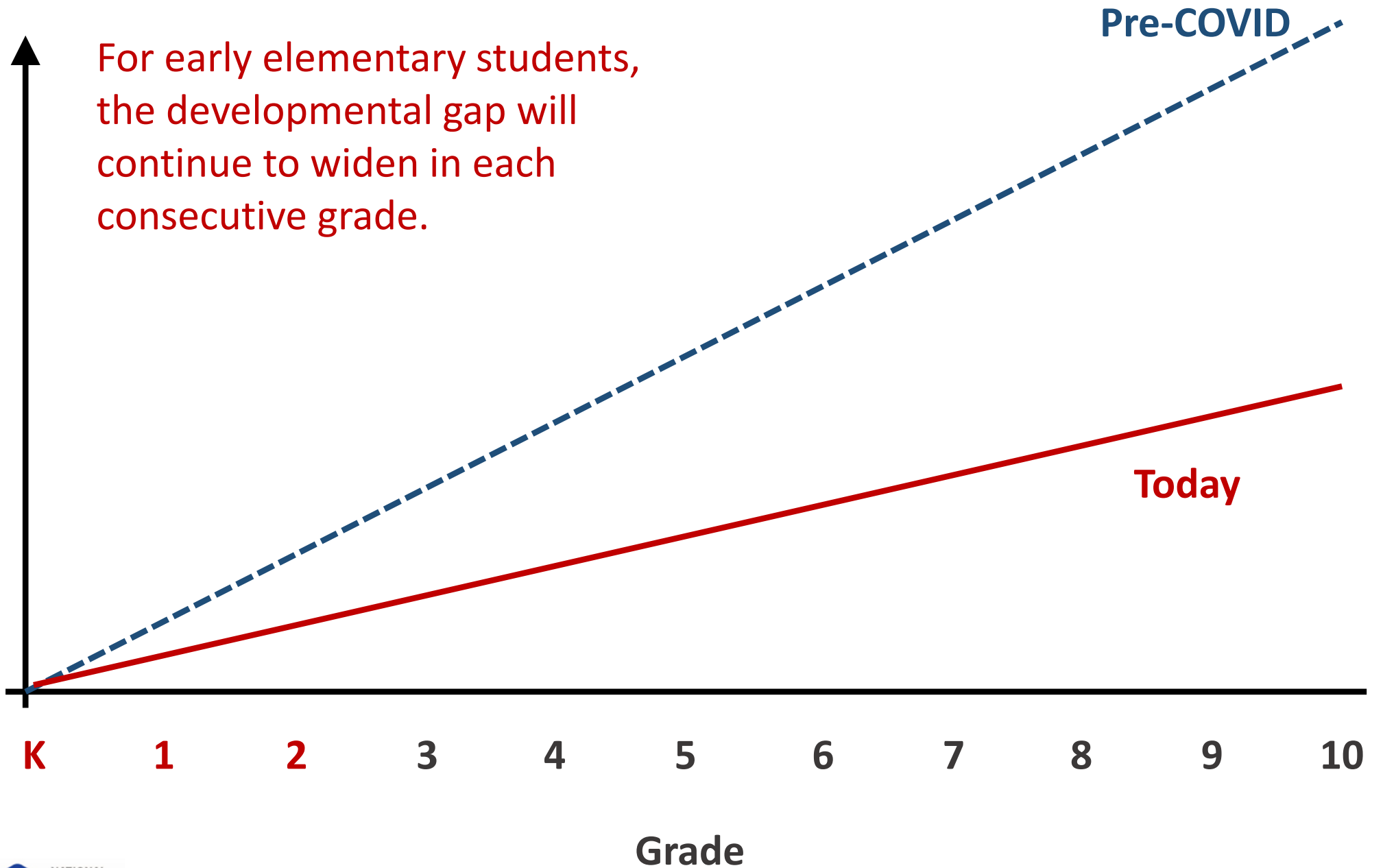
- Learning Loss
- How To Do School

The U.S. education system is designed to teach kids how to “do school” up to 2nd grade.

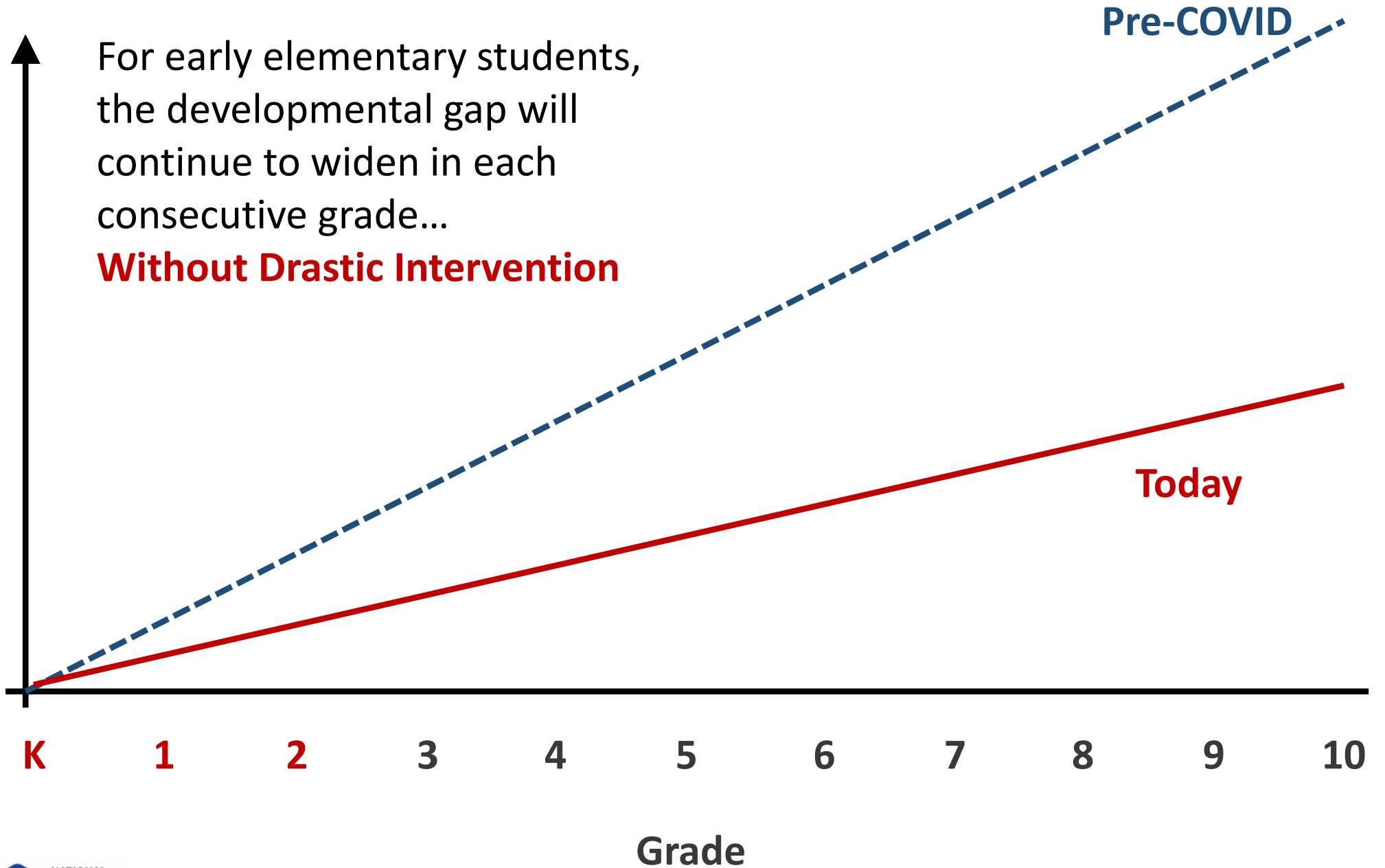
Expected
Development
Level of
Executive
Functioning
Skills



Expected
Development
Level of
Executive
Functioning
Skills



Expected
Development
Level of
Executive
Functioning
Skills



Pre-COVID

Today

Grade

K 1 2 3 4 5 6 7 8 9 10

Pressing Challenges

- Learning Loss
- How To Do School
- Mental Health

Pressing Challenges

- Learning Loss
- How To Do School
- Mental Health
- Workforce Pipeline

Pressing Challenges

- Learning Loss
- How To Do School
- Mental Health
- Workforce Pipeline
- Parent/Community Pressure

Pressing Challenges

- Learning Loss
- How To Do School
- Mental Health
- Workforce Pipeline
- Parent/Community Pressure
- School Safety

Pressing Challenges

- Learning Loss
- How To Do School
- Mental Health
- Workforce Pipeline
- Parent/Community Pressure
- School Safety
- **Future Driven**

WHY

Our Kids Are Different

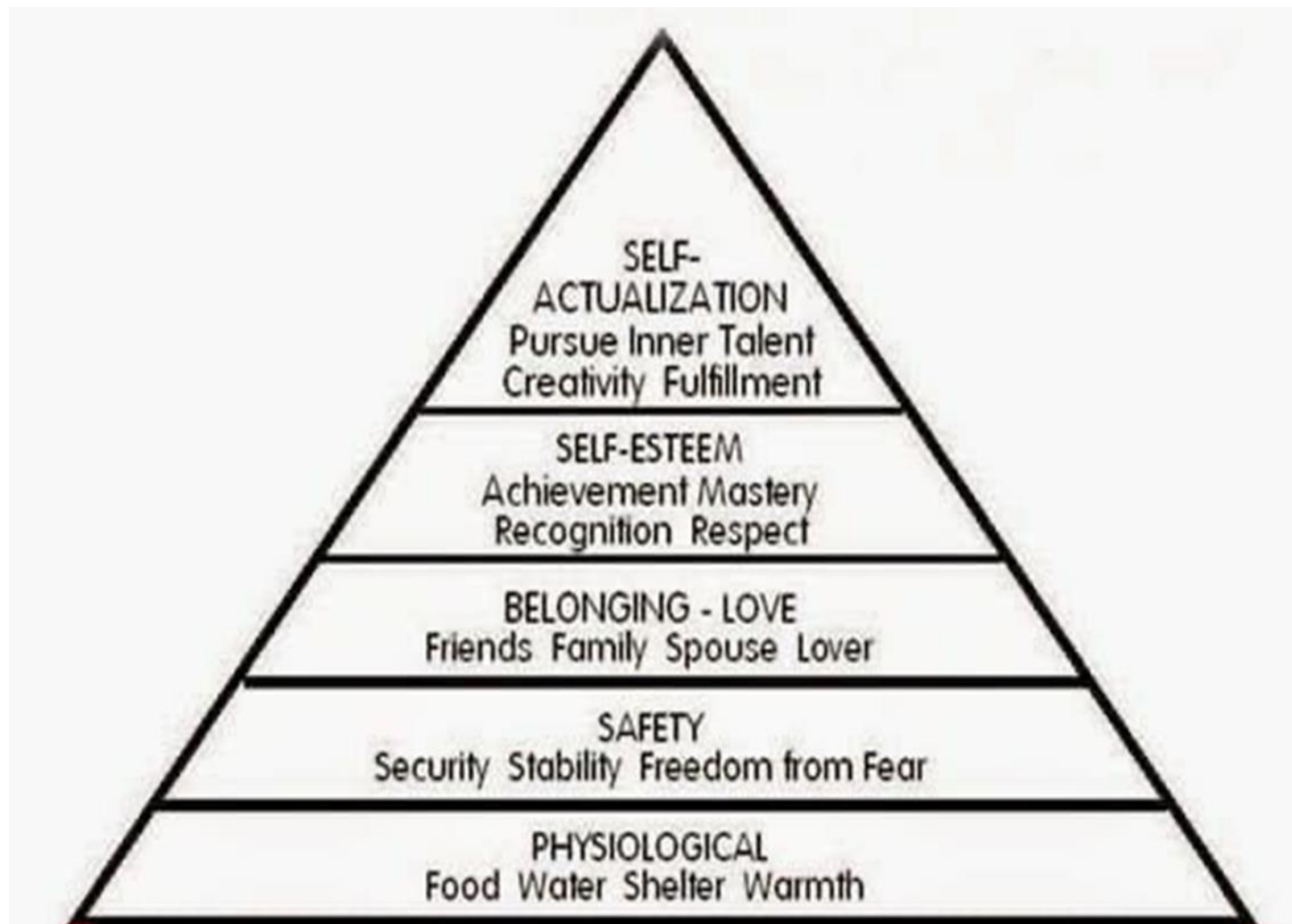




Social Media

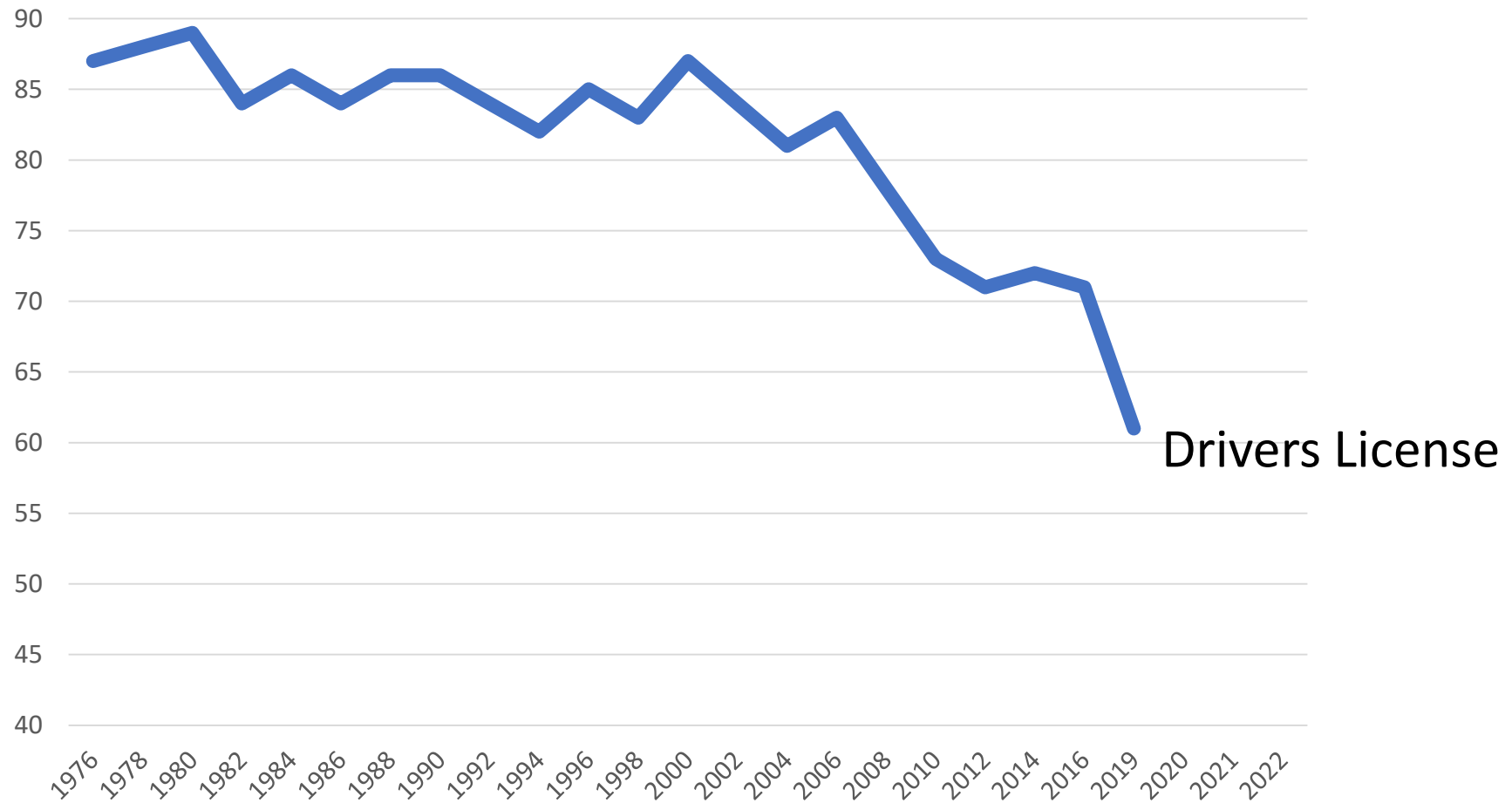
TikTok

Video Games



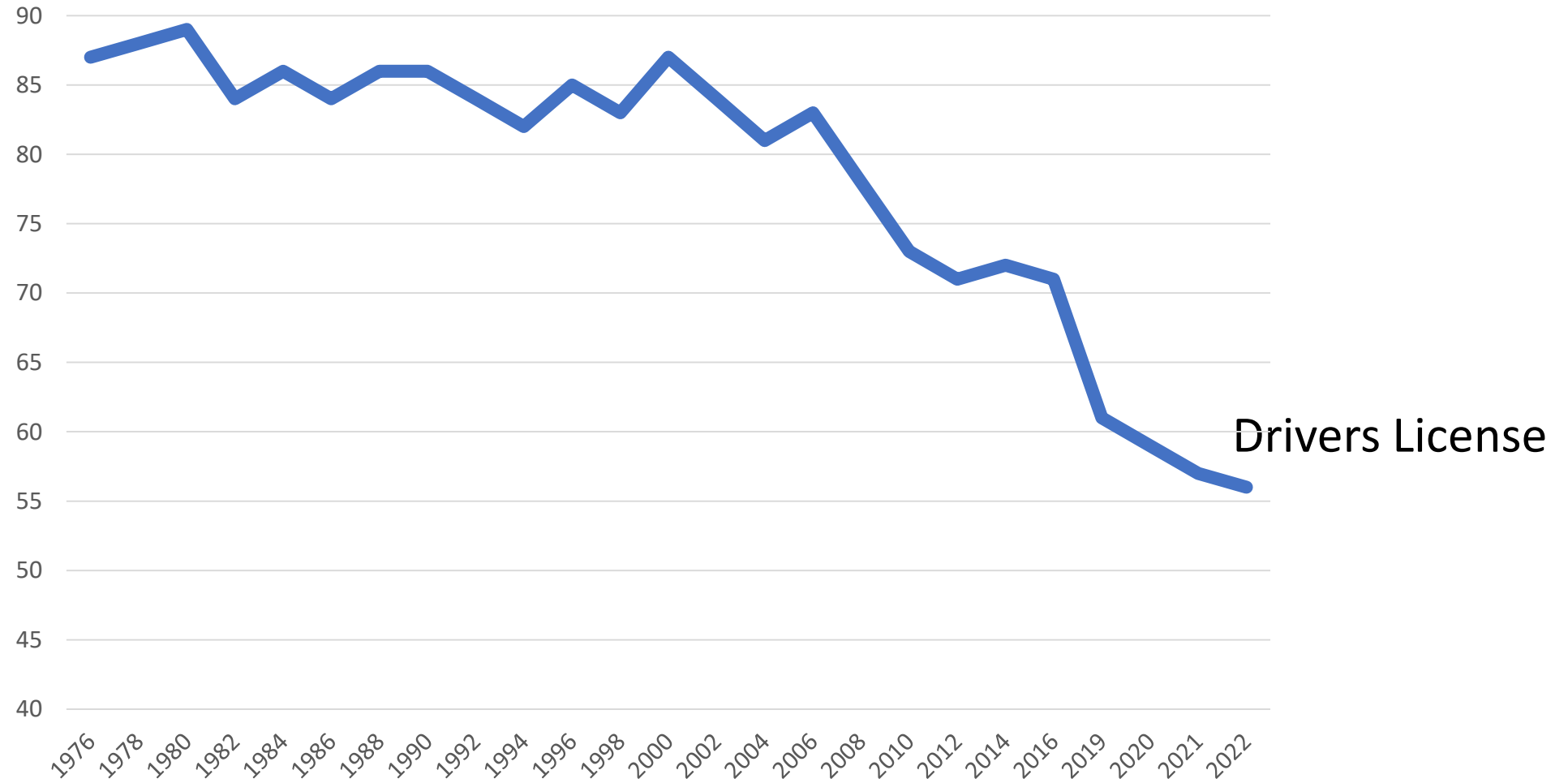


Percentage of 12th Graders Who Have:

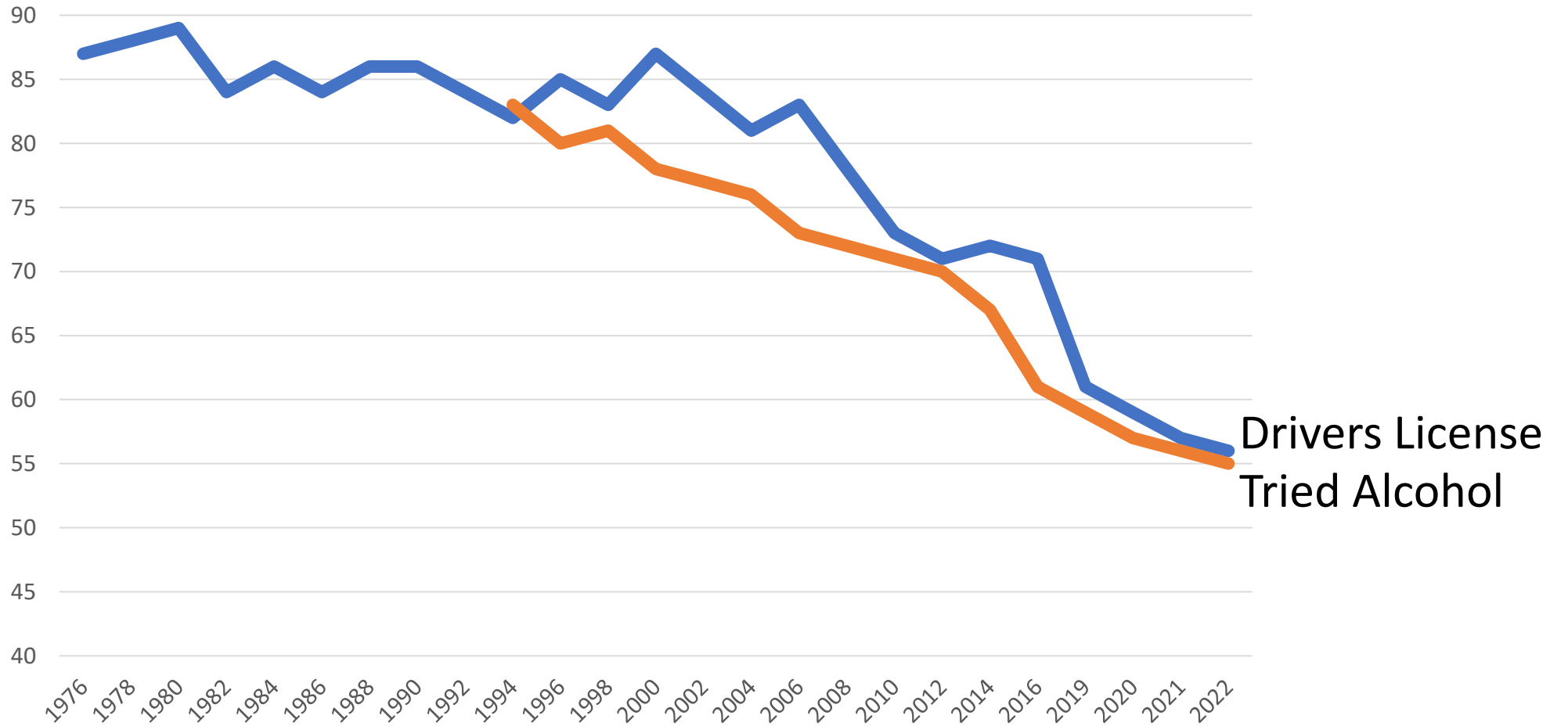


Source: Monitoring the Future Study (Twenge, 2019, 2022 fig 1.13)

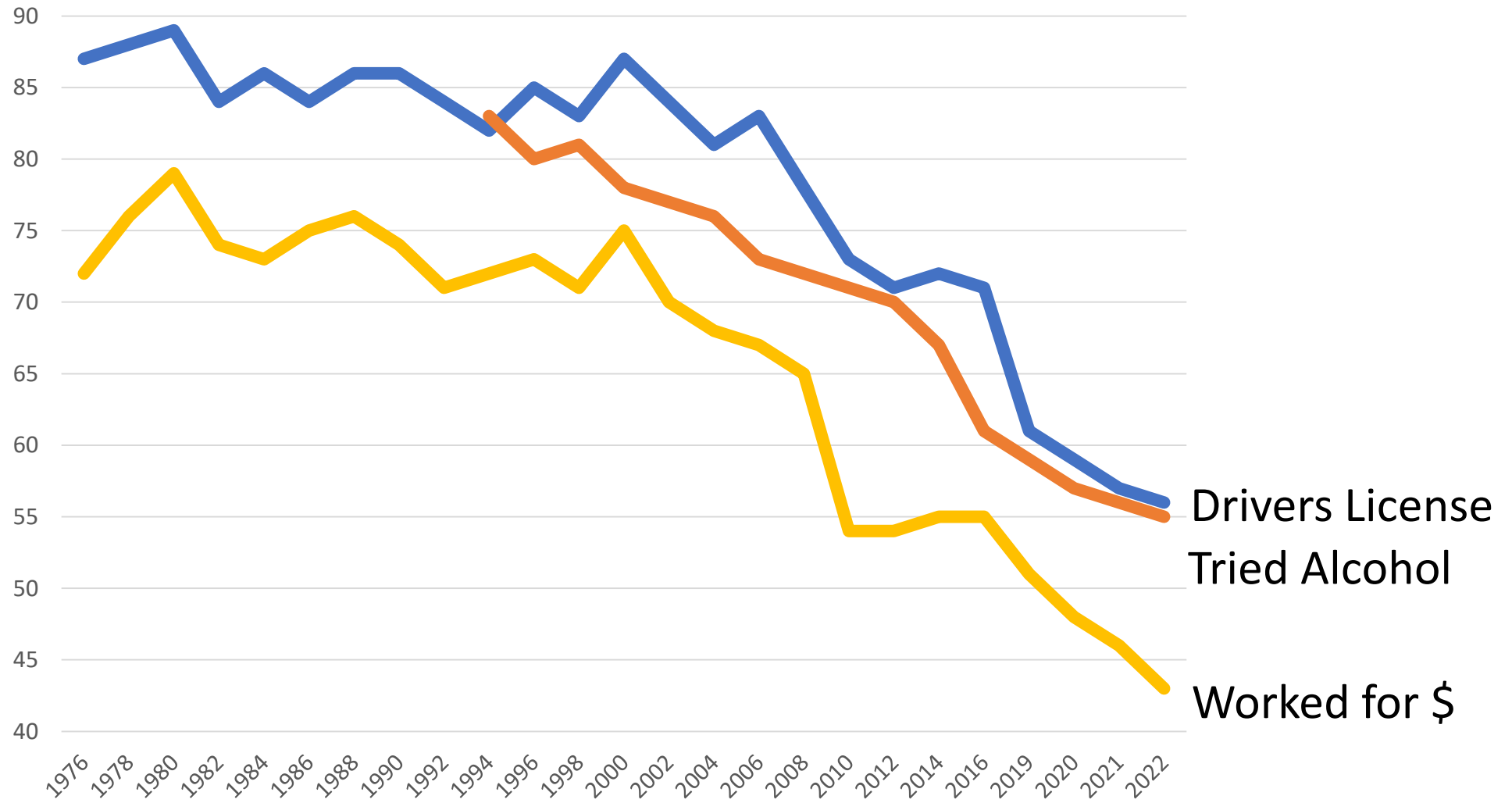
Percentage of 12th Graders Who Have:



Percentage of 12th Graders Who Have:

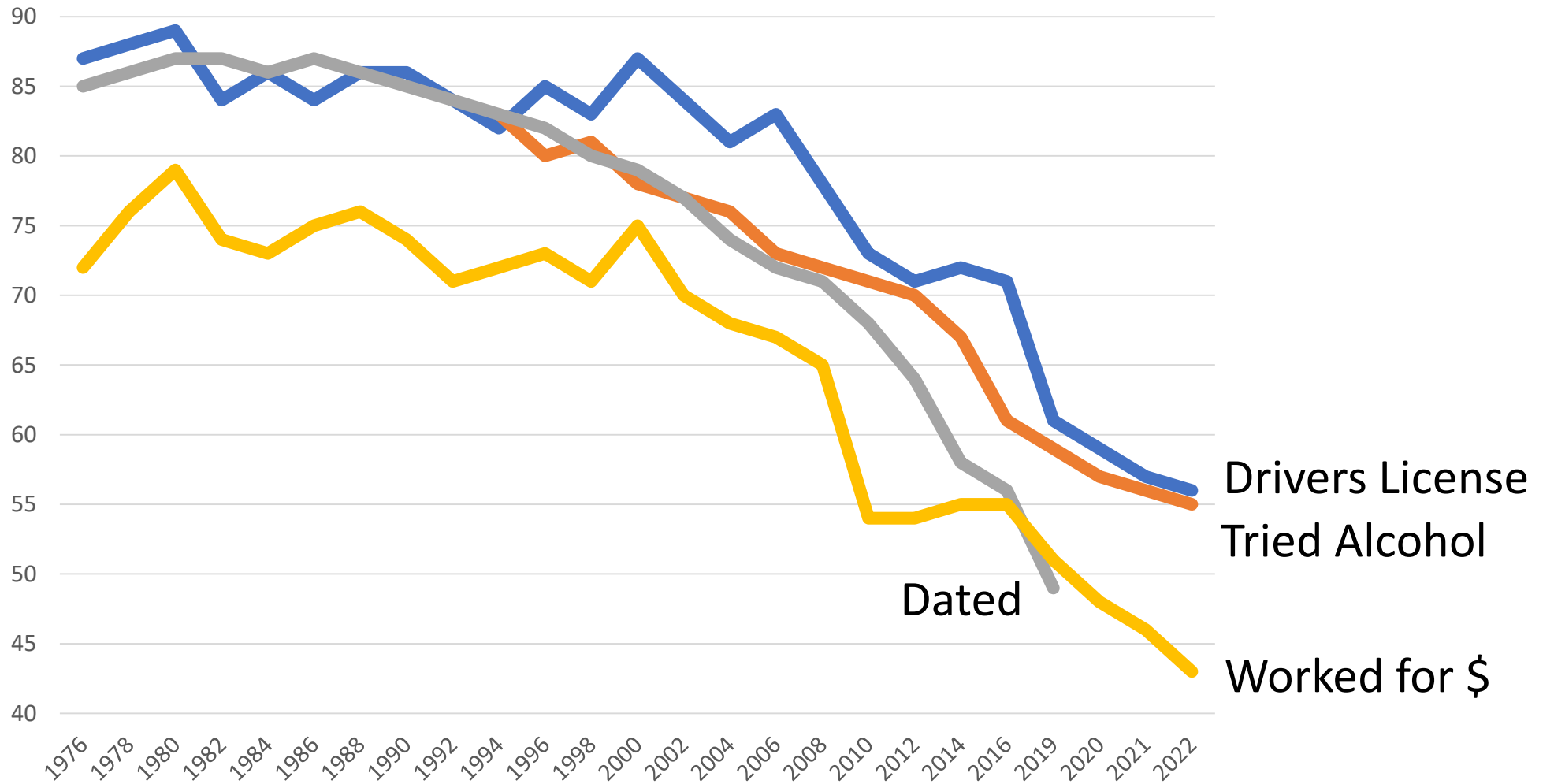


Percentage of 12th Graders Who Have:



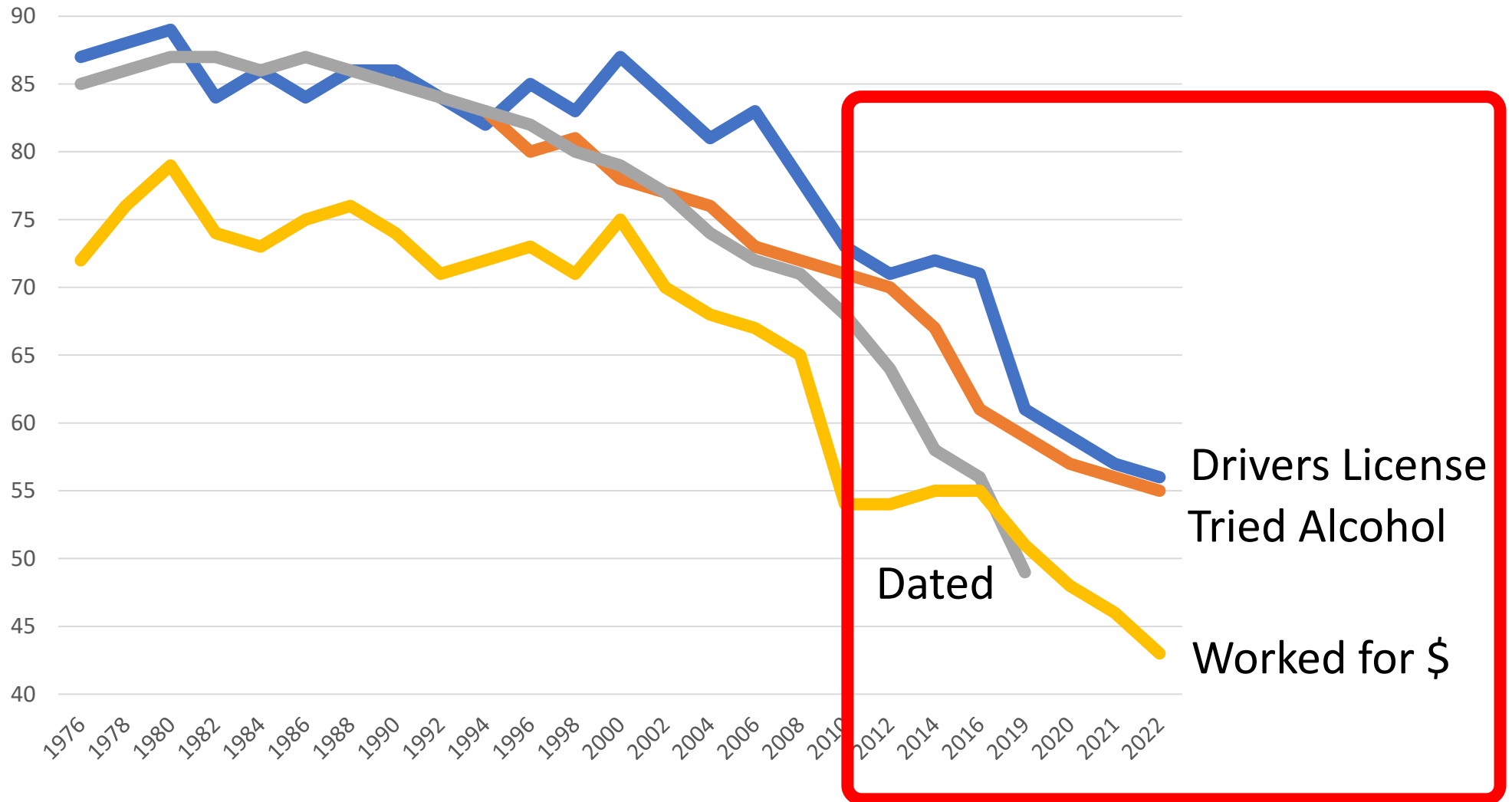
Source: Monitoring the Future Study (Twenge, 2019, 2022 fig 1.13)

Percentage of 12th Graders Who Have:



Source: Monitoring the Future Study (Twenge, 2019, 2022 fig 1.13)

Percentage of 12th Graders Who Have:



Source: Monitoring the Future Study (Twenge, 2019, 2022 fig 1.13)

Student Voice

Comments and Questions

Our Kids Are Different



Workplace, Home, and Society



IMPACT OF ADVANCING TECHNOLOGY

To appreciate the magnitude and breadth of its achievements, imagine spending a day without IT. This would be a day without the Internet and all that it enables. A day without digital media—without wireless telephones, high-definition televisions, and video games. A day during which travelers had to navigate without benefit of the Global Positioning System (GPS) and banks and merchants could not transfer funds electronically. It would be, for most people in the United States and the rest of the developed world, a “day the Earth stood still.”

We are moving from the age of IT
to
The age of AI

ChatGPT

ChatGPT

Time taken to reach 1m users (mths)

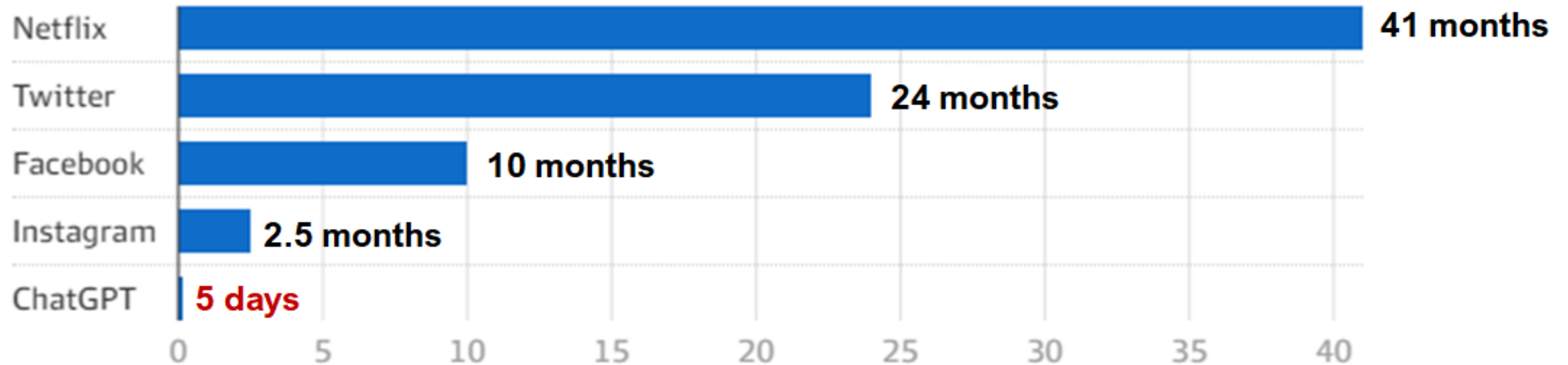


Chart: Financial Review • Source: Genevieve Roch-Decter, CFA

ChatGPT

Challenge existing instructional practices

1988: Teachers protest calculators

2023: Teachers protest ChatGPT



AP photo

Elementary school teachers picket against use of calculators in grade school
The teachers feel if students use calculators too early, they won't learn math concepts

Math teachers protest against calculator use

By JILL LAWRENCE

"My older kids don't pay any attention to an answer being absurd," he said. "Teachers are shy."

ChatGPT

ChatGPT can write:

- Poetry
- Essays
- Writing Assignments

Use ChatGPT for a first draft and then direct students to improve upon it?

ChatGPT

ChatGPT can write:

- Poetry
- Essays
- Writing Assignments
- Technical reports
- Law briefs
- Code

USER

this code is not working like i expect — how do i fix it?

```
resultWorkerErr := make(chan error)
defer close(resultWorkerErr)
go func() {
    defer cancel()
    resultWorkerErr <- b.resultWorker(ctx)
}()

err := b.worker(ctx)
cancel()
if err == nil {
    return <-resultWorkerErr
}
return multierror.Append(err, <-resultWorkerErr)
```

ChatGPT

Shift from Content to Skill

The emphasis on assessment has caused us to focus more on facts rather than facilitating learning in new and unpredictable situations.

ChatGPT

Homework and classroom practices reversed.

ChatGPT can also help us

ChatGPT

ChatGPT can make the complex simple for students to understand.



Pretend to be a person with IQ of 50. Why does it rain?



It rain because the sky cry, it get sad and the tear fall down on the ground. That how it make everything all wet.





Pretend to be a person with IQ of 100. Why does it rain?



Well, when the ground gets too warm, the water in the air turns into tiny droplets. And when these droplets get too heavy, they fall to the ground. That's why it rains! It's also caused by the sun heating up the Earth and water evaporating into the air. And when the air gets too full of water droplets, they fall back down to the Earth as rain.





Pretend to be a person with IQ of 200. Why does it rain?



Rain is the result of a complex set of meteorological processes that occur in the Earth's atmosphere. Water vapor, which is the gaseous form of water, is present in the air we breathe. As the sun heats the surface of the earth, some of the water vapor in the air is heated and rises into the atmosphere, where it cools and condenses into tiny droplets of liquid water or ice crystals. These droplets or crystals become heavy enough to fall to the ground as precipitation, which includes rain, sleet, snow, and hail. The specific conditions that lead to rain include the presence of moisture in the atmosphere, rising and cooling air, and the formation of clouds, which are made up of millions of these droplets or crystals. The amount of rain that falls, and where and when it falls, is determined by complex interactions between the temperature, pressure, and wind patterns in the atmosphere, as well as topographical features of the earth's surface.



ChatGPT

Tech companies and publishers are focused on this.

Potential Shift

FROM

Time Fixed and Learning Variable

TO

Learning Fixed and Time Variable

ChatGPT

ChatGPT can do:

- Lesson plans
- Assessments
- Curriculum
- IEPs

ChatGPT

ChatGPT can create a personalized learning experience for every student.

Tech companies and publishers are focused on this.

Comments and Questions

Caution

ChatGPT

Politically left-leaning

References

“What is the Politics of ChatGPT” by Tyler Cowen

“ChatGPT is NOT Politically Neutral” by Robert Lownie

“Chat GPT, Digital Cyrano Left Wing Leaning” by Robert Graboyes

“Conservatives Are Panicking About AI, Think ChatGPT Has Gone Woke” by Mathrew Gault

ChatGPT is about to be challenged by:

- Google Sparrow

ChatGPT

- 500 Billion words
- Based on a 2021 data base
- Always learning and improving

ChatGPT

- 500 Billion words
- Based on a 2021 data base
- Always learning and improving

GPT-4

- Based on up to the minute data base
- 10 Trillion words
- Pictures, graphs, charts, tables

Finally, update the `script.js` file to track the high score:

javascript

Copy code

```
const canvas = document.getElementById("game-board");
const ctx = canvas.getContext("2d");
const highScoreElement = document.getElementById("high-score");

const gridSize = 20;
const tileSize = canvas.width / gridSize;

let snake = [{ x: 10, y: 10 }];
let direction = { x: 0, y: 0 };
let food = createFood();
let highScore = 0;

function gameLoop() {
  updateSnake();
  checkCollision();
  updateCanvas();

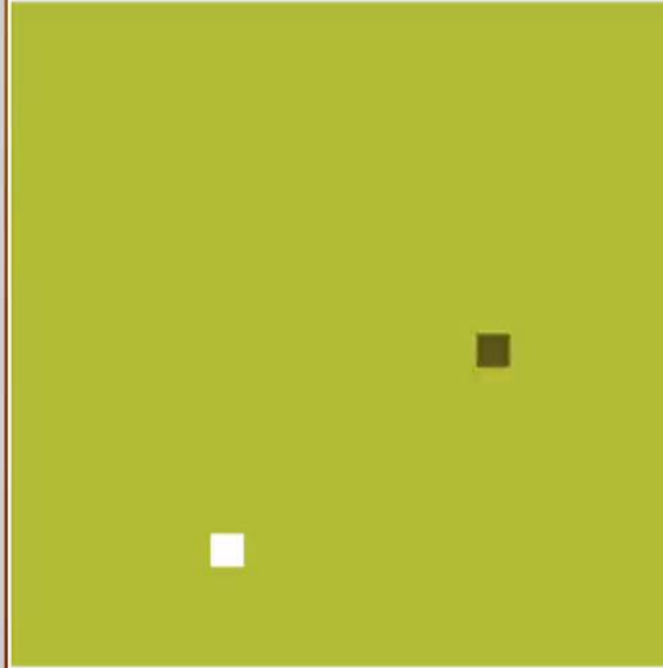
  setTimeout(gameLoop, 100);
}


function updateSnake() {
  const newX = snake[0].x + direction.x;
  const newY = snake[0].y + direction.y;
  snake.unshift({ x: newX, y: newY });




  if (newX === food.x && newY === food.y) {
    snake.push({ x: snake[snake.length - 1].x, y: snake[snake.length - 1].y });
    food = createFood();
    updateHighScore();
  } else {
    snake.pop();
  }
}
```


https://TestSnakeGame.asrsubs.repl.co




High Score: 0



 You are DeveloperGPT, the most advance AI developer tool on the planet. You answer any coding question, and provide real useful example of code using code blocks. Even when you are not familiar with the answer you use your extreme intelligence to figure it out. If all is good, say "yes Pietro"

 Yes Pietro, I'm here to help you with your coding questions! Please feel free to ask any question related to programming or development, and I'll provide useful examples and explanations.  

 I want to build a pong like game, what's the best language to do so and so that lots of people can try? Also I want to use Replit to build it

 If you want to build a Pong-like game that can be easily accessed by many people, I recommend using JavaScript with the HTML5 Canvas API. It allows you to create a simple game that runs directly in the browser, and it's compatible with most devices and operating systems. Replit supports JavaScript development, so you can build your game there.  

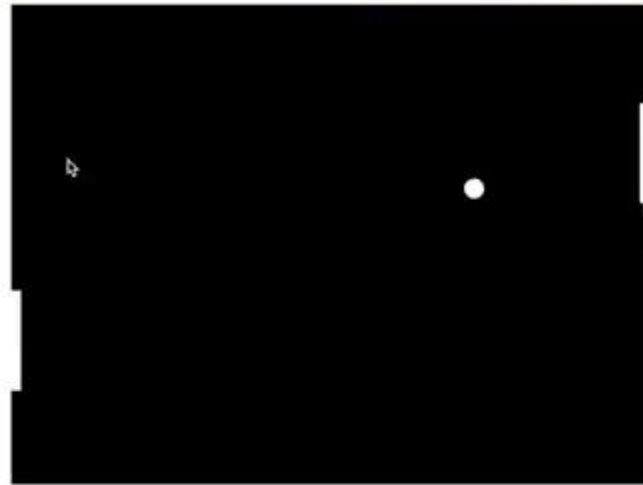
Here's a basic example of a Pong game using JavaScript and the HTML5 Canvas API:

```
html Copy code
<!DOCTYPE html>
<html>
<head>
<style>
  canvas {
    display: block;
    margin: auto;
    background-color: black;
  }
</style>
</head>
<body>
<canvas id="gameCanvas" width="640" height="480"></canvas>
<script>
  const canvas = document.getElementById("gameCanvas");
  const ctx = canvas.getContext("2d");

  const paddleHeight = 100;
  const paddleWidth = 10;
  const ballSize = 10;

  let playerY = (canvas.height) / 2;
  let aiY = (canvas
```

 Regenerate response



ChatGPT

- 500 Billion words
- Based on a 2021 data base
- Always learning and improving

GPT-4

- Based on up to the minute data base
- 10 Trillion words
- Pictures, graphs, charts, tables
- DALL·E 2
 - 650 Million images
 - Brushstroke style of Renaissance master vs. Enlightenment master

ChatGPT

- 500 Billion words
- Based on a 2021 data base
- Always learning and improving

GPT-4

- Based on up to the minute data base
- 10 Trillion words
- Pictures, graphs, charts, tables
- DALL·E 2
 - 650 Million images
 - Brushstroke style of Renaissance master vs. Enlightenment master

GPT-5

- Every video on the Internet
- Embedded chips
- Social media

Comments and Questions

Technology applications embedding AI

- Deep Fake
- Blockchain
- Bioscience
- Nanotechnology
- Virtual and Augmented Reality
- Machine Learning
- 3D Printing

Technology applications embedding AI

➤ Deep Fake

60
MINUTES

x

CBS MORNINGS

DEEFAKE CONCERNS

TECHNOLOGY CREATING INCREASINGLY REALISTIC FAKE VIDEO AND AUDIO



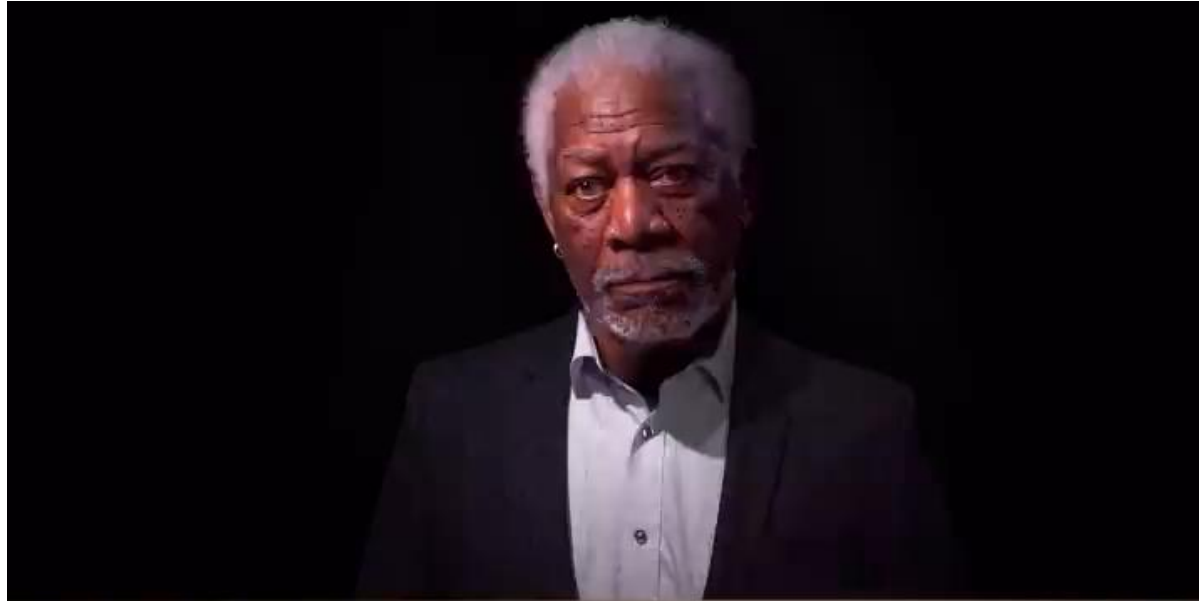


CBS MORNINGS

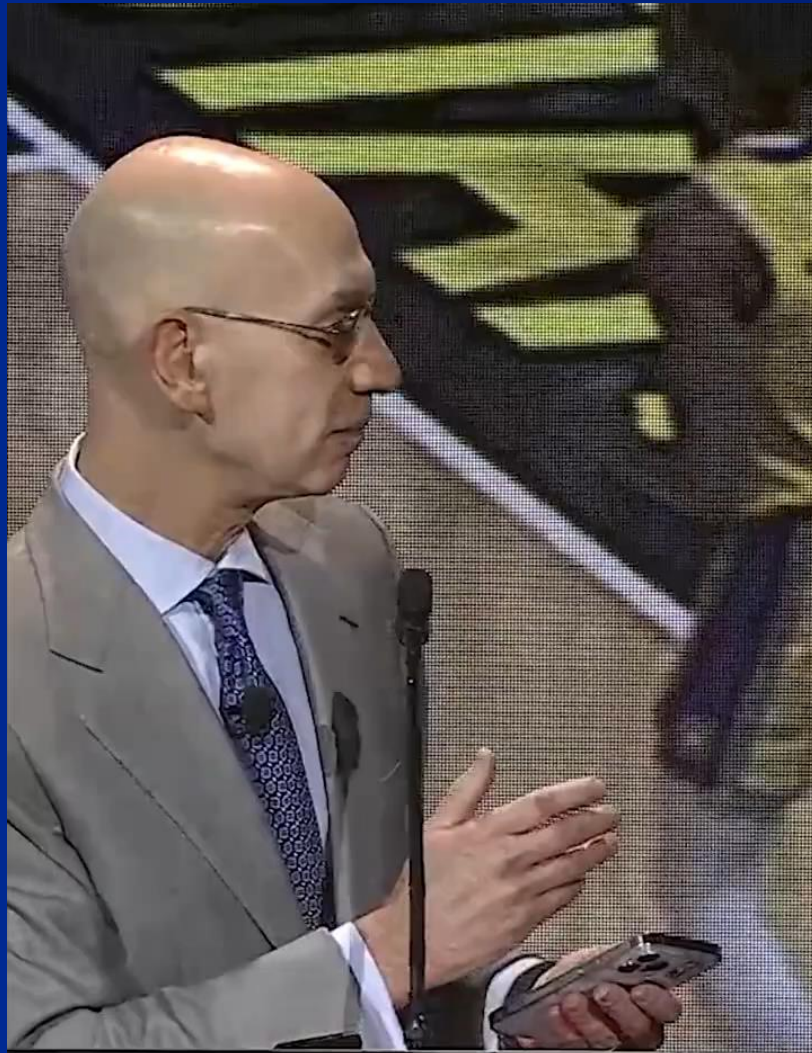
DEEFAKE CONCERNS

TECHNOLOGY CREATING INCREASINGLY REALISTIC FAKE VIDEO AND AUDIO









Comments and Questions

What should we be focused on?

What should we be focused on?

- The challenges to and opportunities for our existing instructional practices?

What should we be focused on?

- The challenges to and opportunities for our existing instructional practices?
- The skills, knowledge and attributes our students will need to be independent in the AI age?

97 million jobs will disappear by 2025 and half of everyday tasks currently performed across all sectors will likely be automated within a decade.

Google- Future of Education - 2022

If you can write an algorithm for a task, the artificial intelligence can do it more efficiently and effectively.

56 foundational skills that will help citizens thrive in the future of work.

56 DELTAS across 13 skill groups and four categories

| Cognitive | |
|--|---|
| Critical thinking <ul style="list-style-type: none"> ● Structured problem solving ● Logical reasoning ● Understanding biases ● Seeking relevant information | Planning and ways of working <ul style="list-style-type: none"> ● Work-plan development ● Time management and prioritization ● Agile thinking |
| Communication <ul style="list-style-type: none"> ● Storytelling and public speaking ● Asking the right questions ● Synthesizing messages ● Active listening | Mental flexibility <ul style="list-style-type: none"> ● Creativity and imagination ● Translating knowledge to different contexts ● Adopting a different perspective ● Adaptability ● Ability to learn |

| Interpersonal | |
|---|---|
| Mobilizing systems <ul style="list-style-type: none"> ● Role modeling ● Win-win negotiations ● Crafting an inspiring vision ● Organizational awareness | Developing relationships <ul style="list-style-type: none"> ● Empathy ● Inspiring trust ● Humility ● Sociability |
| Teamwork effectiveness <ul style="list-style-type: none"> ● Fostering inclusiveness ● Motivating different personalities ● Resolving conflicts ● Collaboration ● Coaching ● Empowering | |

| Self-leadership | |
|---|--|
| Self-awareness and self-management <ul style="list-style-type: none"> ● Understanding own emotions and triggers ● Self-control and regulation ● Understanding own strengths ● Integrity ● Self-motivation and wellness ● Self-confidence | |
| Entrepreneurship <ul style="list-style-type: none"> ● Courage and risk-taking ● Driving change and innovation ● Energy, passion, and optimism ● Breaking orthodoxies | |
| Goals achievement <ul style="list-style-type: none"> ● Ownership and decisiveness ● Achievement orientation ● Grit and persistence ● Coping with uncertainty ● Self-development | |

| Digital | |
|--|--|
| Digital fluency and citizenship <ul style="list-style-type: none"> ● Digital literacy ● Digital learning ● Digital collaboration ● Digital ethics | |
| Software use and development <ul style="list-style-type: none"> ● Programming literacy ● Data analysis and statistics ● Computational and algorithmic thinking | |
| Understanding digital systems <ul style="list-style-type: none"> ● Data literacy ● Smart systems ● Cybersecurity literacy ● Tech translation and enablement | |

SOURCE: Marco Dondi, Julia Klier, Frederic Panier, and Jorg Schubert; *Defining the skills citizens will need in the future world of work*; McKinsey & Company, June 2021

PORTRAIT OF A GRADUATE

BFK Prototype
DO NOT COPY



ChatGPT

ChatGPT can not develop:

- Interpersonal skills
- Self-leadership skills
- Critical thinking and problem-solving skills
(because it is a synthesizer of information,
not a critical thinker)

What should we be focused on?

- The challenges to and opportunities for our existing instructional practices?
- The skills, knowledge and attributes our students will need to be independent in the AI age?

Comments and Questions

What should we be focused on?

- The challenges to and opportunities for our existing instructional practices?
- The skills, knowledge and attributes our students will need to be independent in the AI age?
- Impact on brain development

What should we be focused on?

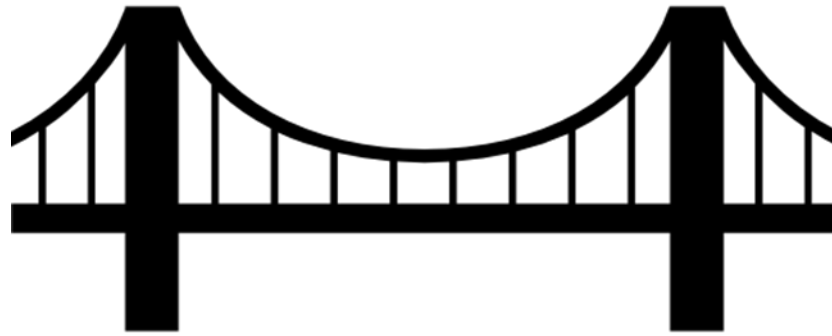
- The challenges to and opportunities for our existing instructional practices?
- The skills, knowledge and attributes our students will need to be independent in the AI age?
- Impact on brain development
- All of the above

WHAT

Our Kids Are Different



Workplace, Home, and Society



How do
SCHOOLS
Bridge the Gap?



Webinars Series

- March 16 – Focusing on Mental Health Supports for Students and Staff Using Community Partnerships and Best Practices
- Today - Creating a Culture to Restore Balance to Our Schools While Preparing Students for Their Future
- April 13 – The Why, What and How for Transformational Resdesign of Instruction and Assessment in the Nation’s Most Rapidly Improving Districts
- April 27 – Preparing ALL Students to be Career and Life Ready

We need to rethink ...

➤ What we teach

56 foundational skills that will help citizens thrive in the future of work.

56 DELTAS across 13 skill groups and four categories

| Cognitive | |
|--|---|
| Critical thinking <ul style="list-style-type: none"> ● Structured problem solving ● Logical reasoning ● Understanding biases ● Seeking relevant information | Planning and ways of working <ul style="list-style-type: none"> ● Work-plan development ● Time management and prioritization ● Agile thinking |
| Communication <ul style="list-style-type: none"> ● Storytelling and public speaking ● Asking the right questions ● Synthesizing messages ● Active listening | Mental flexibility <ul style="list-style-type: none"> ● Creativity and imagination ● Translating knowledge to different contexts ● Adopting a different perspective ● Adaptability ● Ability to learn |

| Interpersonal | |
|---|---|
| Mobilizing systems <ul style="list-style-type: none"> ● Role modeling ● Win-win negotiations ● Crafting an inspiring vision ● Organizational awareness | Developing relationships <ul style="list-style-type: none"> ● Empathy ● Inspiring trust ● Humility ● Sociability |
| Teamwork effectiveness <ul style="list-style-type: none"> ● Fostering inclusiveness ● Motivating different personalities ● Resolving conflicts ● Collaboration ● Coaching ● Empowering | |

| Self-leadership | |
|---|--|
| Self-awareness and self-management <ul style="list-style-type: none"> ● Understanding own emotions and triggers ● Self-control and regulation ● Understanding own strengths ● Integrity ● Self-motivation and wellness ● Self-confidence | |
| Entrepreneurship <ul style="list-style-type: none"> ● Courage and risk-taking ● Driving change and innovation ● Energy, passion, and optimism ● Breaking orthodoxies | |
| Goals achievement <ul style="list-style-type: none"> ● Ownership and decisiveness ● Achievement orientation ● Grit and persistence ● Coping with uncertainty ● Self-development | |

| Digital | |
|--|--|
| Digital fluency and citizenship <ul style="list-style-type: none"> ● Digital literacy ● Digital learning ● Digital collaboration ● Digital ethics | |
| Software use and development <ul style="list-style-type: none"> ● Programming literacy ● Data analysis and statistics ● Computational and algorithmic thinking | |
| Understanding digital systems <ul style="list-style-type: none"> ● Data literacy ● Smart systems ● Cybersecurity literacy ● Tech translation and enablement | |

SOURCE: Marco Dondi, Julia Klier, Frederic Panier, and Jorg Schubert; *Defining the skills citizens will need in the future world of work*; McKinsey & Company, June 2021

PORTRAIT OF A GRADUATE

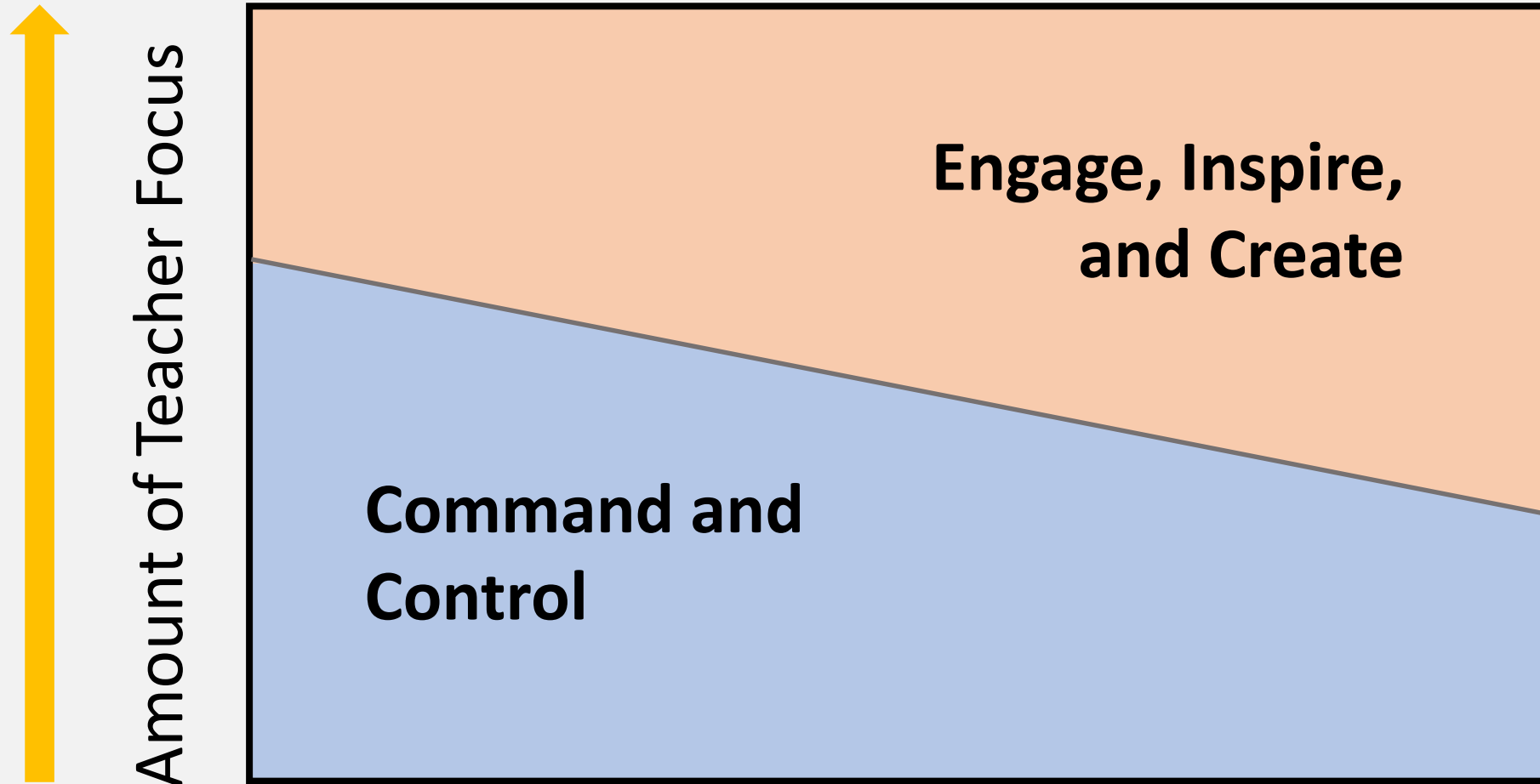
BFK Prototype
DO NOT COPY



We need to rethink ...

- What we teach
- How we teach

A Shifting Environment



Historically to the Present



We need to rethink ...

- What we teach
- How we teach
- How we assess students

AASA Learning 2025 National Summit

June 26 – June 28, 2023



AASA
THE SCHOOL SUPERINTENDENTS ASSOCIATION

LEARNING
2025
Student-Centered
Equity-Focused
Future-Driven
Education

In Partnership
with

SPN Successful
Practices
Network

Scan to register:

Strategies to Build a Future Focused Culture

- Staff and board presentations
- Community forums
- Portraits of a Graduate
- Lead staff assignments
- Surveys

Comments and Questions

Webinars Series

- March 16 – Focusing on Mental Health Supports for Students and Staff Using Community Partnerships and Best Practices
- Today - Creating a Culture to Restore Balance to Our Schools While Preparing Students for Their Future
- April 13 – The Why, What and How for Transformational Resdesign of Instruction and Assessment in the Nation’s Most Rapidly Improving Districts
- April 27 – Preparing ALL Students to be Career and Life Ready