COUNTY OF HENRICO
DEPARTMENT OF FINANCE
PURCHASING DIVISION
CONTRACT EXTRACT
NOTICE OF RENEWAL

DATE:	June 30, 2025
CONTRACT COMMODITY/SERVICE: *(include contracting entity if cooperative)*	Business & Information Software for Workforce & Caerer Development
CONTRACT NUMBER:	iRFP 9573B
COMMODITY CODE:	924.86
CONTRACT PERIOD:	July 1, 2025 through June 30, 2026
RENEWAL OPTIONS:	None
USER DEPARTMENT:	Schools
Contact Name:	Mac Beaton- Director Workforce & Career Development
Phone Number:	804-781-1810
Email Address:	mrbeaton@henrico.k12.va.us
HENRICO COOPERATIVE TERMS INCLUDED:	Yes
SUPPLIER: Name:	CodeCombat, Inc.
Address:	2261 Market Street, #4388
City, State:	San Francisco, CA 94114
Contact Name:	NIck Winter
Phone Number:	833-488-8484
Email address:	nick@codecombat.com support@codecombat.com
ORACLE SUPPLIER NUMBER:	277445
BUSINESS CATEGORY:	Small
PAYMENT TERMS:	Net 45
DELIVERY:	As needed and requested
FOB:	Destination
BUYER: Name:	Eileen M. Falcone CPPB
Title:	Purchasing Manager
Phone:	804-501-5637
Email:	Fal51@henrico.gov

This contract is the result of a competitive solicitation issued by the Department of Finance, Purchasing Division. A requisition must be generated for all purchases made against this contract and the requisition must reference the contract number.

***TOTAL SPEND FOR CONTRACTS 9573A,B and C MUST NOT EXCEED $100,000 OVER A 5-YEAR PERIOD**

**See spreadsheet in Sharepoint

Attachment 1

PRICING OPTIONS - Attachment C

Provide pricing for the scenario below based off pricing

being offered:

*NOTE: A pricing document has been attached with the iRFP for clarification on pricing for all resources that CodeCombat offers and would be possible for HCPS to purchase.

Scenario	**Price**
Provide pricing for an annual subscription for one site licenses for a high school for 149 Business students	$5,215
Virtual training for 25 teachers (minimum one hour)	$1,000 per 1 hour session

Provide pricing as it relates to the proposed solution

*NOTE: A pricing document has been attached with the iRFP for clarification on pricing for all resources that CodeCombat offers and would be possible for HCPS to purchase.

	Price
Price per Student (provide details if tiered pricing is offered)	See Attached Pricing Document
Price per Teacher	NA, CodeCombat does not charge per teacher for licenses
Price per Classroom	NA, CodeCombat does not charge per classroom for licenses
Price per Site	$6,000 per site
Price for District License 6-12	NA, CodeCombat does not do their license structure this way

Virtual training to introduce teachers to the platform, inform how to find user instructor materials and answer questions.	Implementation Training. See attached pricing document
Additional Professional Development models	$2,000 per teacher. Reference the Professional Development Flyer and TOC for more information
Printed materials - provide list of pricing for each product offered	NA
Consumables - provide list of pricing for each product offered	NA

CodeCombat's 2021 Standard Tiered Pricing

# of Users	CodeCombat and Ozaria
Up to 99 Students	$50/student
100 to 249 Students	$35/student
250 to 499 Students	$27/student
500 to 899 Students	$22/student
900 to 1,499 Students	$19/student
1,500 to 2,399 Students	$16/student
2,400+ Students	$14/student

Multi-year Discounts (Not available for pilots)
*TCV = Total Contract Value

Paid Upfront - (2 years)	15% off TCV
Paid Upfront - (3 years)	20% off TCV
Paid Upfront - (4 years)	25% off TCV
Paid Upfront - (5 years)	30% off TCV

2021 Standard Pricing - Professional Development

Professional Development	Cost Per Teacher
Standard Pricing	$2,000
Early Bird Pricing - before its release in August	$1,500

2021 Standard Pricing - Implementation Training

School-Wide Training (up to 10 attendees)	$500
District-Wide Training - includes 1 admin session and 1 teacher session 2 teacher sessions (up to 25 attendees)	$1,000

2021 Standard Pricing - AI League (Esports)

School Customized Tournament Option 1	$1,000 per school per year
School Customized Tournament Option 2	$500 per school per season
District Customized Tournament	Customized pricing for each district

COMMONWEALTH OF VIRGINIA

County of Henrico

Non-Professional Services Contract
Contract No. 9573B

This Non-Professional Services Contract (this "Contract") entered into this 20th day of September 2021, by CodeCombat, Inc. (the "Contractor") and the County School Board of Henrico, Virginia (the "HCPS")

WHEREAS HCPS has awarded the Contractor this Contract pursuant to Informal Request for Proposals No. 9573, (the "Informal Request for Proposal"), for Business and Information Software for Workforce and Career Development Students.

WITNESSETH that the Contractor and HCPS, in consideration of the mutual covenants, promises and agreements herein contained, agree as follows:

SCOPE OF CONTRACT: The Contractor shall provide the services to HCPS as set forth in the Contract Documents.

COMPENSATION: The compensation HCPS will pay to the Contractor under this Contract shall be $9,999 for approximately 427 students to include a one-hour professional implementation training for the initial term of the Contract. Any renewal terms shall be in accordance with Attachment 1.

CONTRACT TERM: The Contract term shall begin on the date HCPS executes this Contract and end June 30, 2022. HCPS may renew the Contract for up to four (4) one-year terms giving 30 days' written notice before the end of the term unless Contractor has given HCPS written notice that it does not wish to renew at least 90 days before the end of the term.

CONTRACT DOCUMENTS: This Contract hereby incorporates by reference the documents listed below (the "Contract Documents") which shall control and take precedence in the following descending order:

1. This Non-Professional Services Contract between HCPS and Contractor;
2. Data Security Agreement (Exhibit A)
3. The General Contract Terms and Conditions included in the Informal Request for Proposal;
4. Contractor's Best and Final Offer dated July 26, 2021 (Exhibit B)
5. Contractor's Original Proposal dated June 22, 2021 (Exhibit C); and
6. The Scope of Services included in the Informal Request for Proposal.

IN WITNESS WHEREOF, the parties have caused this Contract to be duly executed intending to be bound hereby.

CodeCombat, Inc.
2261 Market Street, #4388
San Francisco, CA 94114

Signature

Nicholas Winter, CEO
Printed Name and Title

September 20th, 2021
Date

County School Board of Henrico, Virginia
406 Dabbs House Road
Henrico, VA 23273-0775

Signature

Oscar Knott, CPP, CPPO, VCO
Purchasing Director
9/22/21
Date

APPROVED AS TO FORM

9/21/21
ASSISTANT COUNTY ATTORNEY

ATTACHMENT E

HENRICO COUNTY PUBLIC SCHOOLS DATA SECURITY AGREEMENT

This Data Security Agreement ("Agreement") is agreed upon effective June 22, 2021 , by and between CodeCombat Inc. ("Vendor") and the County School Board of Henrico County, Virginia ("School Board" or "HCPS").

I. DEFINITIONS

A. **HCPS Data**: HCPS Data is any and all data that HCPS has disclosed to Vendor. For the purposes of this Agreement, HCPS Data does not cease to be HCPS Data solely because it is transferred or transmitted beyond HCPS's immediate possession, custody, or control.

B. **Data Breach**: The unauthorized access and acquisition of computerized data that materially compromises the security or confidentiality of confidential or sensitive personal information maintained by HCPS as part of a database of personal information regarding multiple individuals and that causes or HCPS reasonably believes has caused or will cause loss or injury to any HCPS constituent.

C. **System**: An assembly of components that supports an operational role or accomplishes a specific objective. This may include a discrete set of information resources (network, server, computer, software, application, operating system or storage devices) organized for the collection, processing, maintenance, use, sharing, dissemination, or disposition of information.

D. **Contract**. Shall mean the contract between Vendor and HCPS outlining the services to be provided.

II. DISCLOSURE OF HCPS DATA

A. The Vendor shall not disclose HCPS Data in any manner that would constitute a violation of state or federal law or the terms of this agreement including, without limitation, by means of outsourcing, sharing, retransfer, or access, to any person or entity, except:

B. Employees or agents who actually and legitimately need to access or use HCPS Data in the performance of Vendor's duties to HCPS;

C. Such third parties, such as but not limited to, vendors, suppliers or subcontractors, but only after such third party has agreed in writing and in advance of any disclosure, to be bound by confidentiality terms at least as stringent as the terms of this Agreement; or

D. Any other third party approved by HCPS in writing and in advance of any disclosure, but only to the extent of such approval.

E. The Vendor may also store HCPS Data on servers housed in datacenters owned and operated by third parties, provided the third parties take reasonable precautions to protect the security and confidentiality of HCPS data.

III. USE OF, STORAGE OF, OR ACCESS TO HCPS DATA

A. Vendor shall only use, store, or access HCPS data:

1. In accordance with, and only to the extent permissible under the contract for services; and

2. In full compliance with any and all applicable laws and regulations, only to the extent applicable to Vendor, including the Family Educational Rights and Privacy Act (FERPA); and

B. Vendor agrees that the use, storage, and access to HCPS Data shall be performed with that degree of skill, care, and judgment customarily accepted as sound, quality, and professional practices. Vendor shall implement and maintain safeguards necessary to ensure the confidentiality, availability, and integrity of HCPS Data. Vendor shall also implement and maintain any safeguards required to be implemented by applicable state and federal laws and regulations.

C. HCPS reserves the right to request security information reasonably necessary to ascertain HCPS's own compliance with state and federal data privacy laws.

D. If Vendor becomes aware that HCPS Data may have been accessed, disclosed, or acquired without proper authorization and contrary to the terms of this Agreement or the Contract, Vendor shall use reasonable efforts to alert HCPS of any Data Breach within two business days, and shall immediately take such actions as may be necessary to preserve forensic evidence and eliminate the cause of the Data Breach. Vendor shall give highest priority to immediately correcting any Data Breach and shall devote such resources as may be required to accomplish that goal. Vendor shall provide HCPS information necessary to enable HCPS to fully understand the nature and scope of the Data Breach. Upon request, Vendor shall provide HCPS information about what Vendor has done or plans to do to mitigate any deleterious effect of the unauthorized use or disclosure of, or access to, HCPS Data. In the event that a Data Breach requires Vendor's assistance for mitigation, such assistance shall be provided at no cost to HCPS. HCPS may discontinue any services or products provided by Vendor and any payments to Vendor until HCPS, in its sole discretion, determines that the cause of the Data Breach has been sufficiently mitigated.

E. If Vendor is served with any subpoena, discovery request, court order, or other legal request or command that calls for disclosure of any HCPS Data, Vendor shall promptly notify HCPS in writing and provide HCPS sufficient time to obtain a court order or take any other action HCPS deems necessary to prevent disclosure or otherwise protect HCPS Data. In such event, Vendor shall provideHCPS prompt and full assistance in HCPS's efforts to protect HCPS Data. Where Vendor is prohibited by law from notifying HCPS of a legal request for HCPS Data, Vendor will comply with all applicable laws and regulations with respect to the requested HCPS Data.

F. Upon expiration or termination of the Contract, Vendor shall ensure that no Data Breach occurs and shall follow HCPS's instructions as to the preservation, transfer, or destruction of HCPS Data. The method of destruction shall be accomplished by "purging" or "physical destruction", in accordance with National Institute of Standards and Technology (NIST) Special Publication 800-88. Upon requestby HCPS, Vendor shall certify in writing to HCPS that return or destruction of data has been completed. Prior to such return or destruction, Vendor shall continue to protect HCPS Data in accordance with this Agreement.

G. This Agreement shall survive the expiration or earlier termination of the Contract. However, upon expiration or termination of the Contract, either party may terminate this Agreement.

FOR HCPS:	FOR VENDOR:
John Wack	Nicholas Winter
Name	Name
Signature	Signature
Chief Financial Officer	CEO
Title	Title
9/22/21	June 22, 2021
Date	Date

APPROVED AS TO FORM

Alyssa D Brown 9-21-21

ASSISTANT COUNTY ATTORNEY

Debbie D. Wood (ddwood)

From: Taylor Sobha <taylor@codecombat.com>
Sent: Monday, July 26, 2021 4:59 PM
To: Debbie D. Wood (ddwood)
Cc: Liz Coluni; Fahryka P. Elliott (fpelliott)
Subject: Re: CodeCombat's Completed iRFP for Review

Hi Ms. Wood,

The price for Ozaria Licenses and 1 professional training (Ms. Elliot is currently scheduling this with me) for the 21-22 school year is $9,999.

Then from the 22-23 school year on, our pricing is accurately reflected in the iRFP

Sincerely,

CODE COMBAT OZARIA
Taylor Sobha | schedule a Call | M: (919) 504-6573
Account Executive, United States, Southeast
CodeCombat Trailer | Ozaria Trailer

On Mon, Jul 26, 2021 at 12:05 PM Taylor Sobha <taylor@codecombat.com> wrote:
Hi Ms. Wood,

I just left you a voicemail. Please give me a call to clarify a few things at (919) 504-6573.

Sincerely,

CODE COMBAT OZARIA
Taylor Sobha | schedule a Call | M: (919) 504-6573
Account Executive, United States, Southeast
CodeCombat Trailer | Ozaria Trailer

On Mon, Jul 26, 2021 at 11:31 AM Debbie D. Wood (ddwood) <ddwood@henrico.k12.va.us> wrote:

CC-4

Hi Taylor,

This email is to inform you that your firm has been selected to enter into negotiations for iRFP #9573 for Business and Information Software for Workforce and Career Development Students. Please provide your best and final offer pricing and return to me no later than Thursday, July 29, 2021.

Many Thanks,

~Debbie Wood, CPPB

Finance Division Director

Henrico County Public Schools

804-652-3640

804-652-3151 fax

From: Taylor Sobha <taylor@codecombat.com>
Sent: Wednesday, June 30, 2021 7:43 PM
To: Debbie D. Wood (ddwood) <ddwood@henrico.k12.va.us>
Cc: Liz Coluni <liz@codecombat.com>; Fahryka P. Elliott (fpelliott) <fpelliott@henrico.k12.va.us>
Subject: CodeCombat's Completed iRFP for Review

Hi Ms. Wood,

I have linked (I could not attach, file was too large) the completed iRFP for your team's review.

Please note that I have also provided a link to a google folder that contains all pertinent documents, such as the completed iRFP and additional documents (eg. resumes, curriculum support documents, flyers, etc).

CodeCombat's "Henrico iRFP Google Folder" - Click Here

We are very excited about working with Henrico and look forward to hearing from you after your team has had a chance to review the iRFP. In the meantime, please let me know if you need anything.

Henrico iRFP Complete.pdf.zip

Sincerely,

Taylor **(919) 504-6573**

Taylor Sobha | schedule a Call | M: (919) 504-6573
Account Executive, United States, Southeast
CodeCombat Trailer | Ozaria Trailer

EXHBIT C

Code combat

Commonwealth of Virginia
County of Henrico

6/21/2021

Non-Professional Services
Informal Request for Proposal 9573

Business and Information Software for Workforce and Career Development Students

Receipt Date: 06/30/2021

Department: Schools
Contact: Debbie Wood
Telephone: 804-652-3640
Email: ddwood@henrico.k12.va.us

1. **Purpose**
The intent and purpose of this Informal Request for Proposal (iRFP), and the resulting contract, is to obtain the services of a qualified firm to provide
See attached

2. **Background**
See attached

3. **Scope of Work / Services**
The Successful Offeror shall provide all labor, supervision and materials in order to provide the following:
See attached

4. **Anticipated Procurement Schedule**

The following represents a tentative outline of the schedule currently anticipated by the County:

Solicitation Published 06/23/2021

Submit Proposals Electronically to Debbie Wood no later than 6/30/21

Evaluation of Proposals Received 7/1/2021

Discussions with Offerors, if applicable TBD

Contract Awarded 8/1/2021

5. **Proposal Contents**
Offerors shall submit a written proposal that presents the Offeror's qualification and understanding of the work to be performed as follows:

A. Response to Scope of Work/Services.
The Offeror should address each section of the Scope of Work/Services with an indication of their response.

B. Company Profile.
Offerors are to present a company profile that shows the ability, capacity and the skill of the Offeror and

their employees to perform the services provided within the specified time. Provide resumes of the proposed staff to be assigned to the project.

C. References.
Provide a minimum of three (3) references who can attest to the Offeror's past performance to provide services similar to those required in this iRFP.

D. Assumptions.
List any assumptions made when responding to the Scope of Work/Services requirements in Section 3.

E. Exceptions.
List any exceptions to the Scope of Work/Services and Terms and Conditions in a separate section of the Offeror's proposal response and mark as "Exceptions." In the case of a proposal for Information Technology, as defined in Va. Code §2.2-2006, the County shall not require an Offeror to state in a proposal any exception to any liability provisions contained in the iRFP.

F. Pricing / Fee Schedule. Provide detailed pricing / fee schedule for the Scope of Work/Services requested.

See attached

G.

[Insert unique requirements specific to this Informal Request for Proposal.]

6. **Criteria**
Selection of the Successful Offeror will be based upon submission of proposal meeting the following Evaluation Criteria:

Criteria	Weight
Functional Requirements / Compliance with Scope of Services / Work	30
Experience / Qualifications	25
Implementation / Delivery	25
Pricing / Fees	20

7. **Submission Requirements**
Proposals shall be received by the date as set forth in this iRFP. All proposals received by the date specified shall be accepted. Time of receipt shall be determined by the date the proposal is received electronically. No late proposals will be considered and the Offeror will be notified when its proposal is not received on time. *Proposals shall be submitted to the Department Contact via email attachment only. Unless otherwise noted in writing, proposals shall be submitted in a single .pdf format with all contents described in Section 5.*

8. **Evaluation Process**
Proposals received shall be reviewed and evaluated by an Evaluation Committee. Informal discussions/interviews may be conducted as needed.

Should the County determine in writing and at its sole discretion that only one Offeror is fully qualified, or that one Offeror is clearly more highly qualified than the others under consideration, a contract may be negotiated and awarded to that Offeror.

9. **Standard Terms and Conditions** The County of Henrico Terms and Conditions are incorporated by reference into this iRFP. These Terms and Conditions can be viewed on Henrico County's Purchasing Division website at: http://henrico.us/assets/terms.pdf.
   A. Insurance.
   The Successful Offeror shall maintain insurance to protect itself and the County of Henrico (including Henrico County Public Schools) from claims under the Workers' Compensation Act, and from any other claims for damages for personal injury, including death, and for damages to property which may arise from operations under this contract whether such operations be by itself or by any subcontractor or anyone directly employed by either of them. Such insurance shall conform to the County Insurance Specifications located at: http://henrico.us/assets/insurance-2.pdf.

   B. Subject to the limitations of Va. Code § 2.2-4342(F), trade secrets or proprietary information submitted by an Offeror in connection with this procurement transaction shall not be subject to public disclosure under the Virginia Freedom of Information Act; however, the Offeror must invoke the protection of this section prior to or upon submission of data or materials, and must identify the data or other materials to be protected and state the reasons why protection is necessary (Va. Code § 2.2-4342(F)).

   C. By submitting a proposal, the Offeror agrees not to withdraw its proposal after the date set for receipt of proposals for 90 days thereafter.

   D.

   [Insert additional terms and conditions that are applicable to the Scope of Work/Services. (i.e. Direct Contact with Students, Tobacco Free, HIPAA, etc.)]

10. **Contract Award**
    At the conclusion of negotiations, the final terms of the agreement must be confirmed in writing and signed by both parties. The Purchasing Division will notify the Successful Offeror of contract award. The County reserves the right to waive any informality in proposals, to award in part or in whole, to reject any or all proposals received, and to cancel this iRFP.

Signature Sheet

My signature certifies that the proposal as submitted complies with all requirements specified in this Informal Request for Proposal.

My signature also certifies that by submitting a proposal in response to this Informal Request for Proposal, the Offeror represents that in the preparation and submission of this proposal, the Offeror did not, either directly or indirectly, enter into any combination or arrangement with any person or business entity, or enter into any agreement, participate in any collusion, or otherwise take any action in the restraining of free, competitive bidding in violation of the Sherman Act (15 U.S.C. Section 1) or Sections 59.1-9.1 through 59.1-9.17 or Sections 59.1-68.6 through 59.1-68.8 of the Code of Virginia.

I hereby certify that I am authorized to sign as a legal representative for the business entity submitting this proposal.

Legal Name of Offeror (Do Not Use Trade Name)
CodeCombat Inc.
Address:
2261 Market Street #4388
San Francisco, CA 94114
Signature: Nicholas Winter
Name of Person Signing (Print): Nicholas Winter
Title: CEO
Telephone: (833) 488-8383
Email: nick@codecombat.com
Date: June 22, 2021
Virginia State Corporation Commission Identification Number: (http://www.scc.virginia.gov/)
Department of Professional and Occupational Regulation License Number (if applicable): n/a (http://www.dpor.virginia.gov/)

Offeror Information

Business Classification Category: (check box(s))

☐ Small Business ☐ Women-Owned Business ☐ Minority-Owned Business
☐ Service Disabled Veteran ☐ Employment Services Organization
☐ Non-SWaM (not Small, Women, or Minority-Owned)

*Definitions can be found for each of the above at http://henrico.us/pdfs/purchasing/swampolicy.pdf.

VA Minority Business Enterprise (DMBE) Certification No:_____ **Expiration Date:** _____

Business Located in Henrico County: ☐ Yes ☒ No

eVA Registered: ☐ Yes, Supplier Number: _____ ☐ No

PROPRIETARY/CONFIDENTIAL INFORMATION IDENTIFICATION

Trade secrets or proprietary information submitted by an Offeror shall not be subject to public disclosure under the Virginia Freedom of Information Act; however, the Offeror must invoke the protections of Va. Code § 2.2-4342(F) in writing, either before or at the time the data or other materials are submitted. The Offeror must specifically identify the data or materials to be protected including the section(s) of the proposal in which it is contained and the pages numbers, and state the reasons why protection is necessary. A summary of trade secrets and proprietary information submitted shall be submitted on this form. The proprietary or trade secret material submitted must be identified by some distinct method such as highlighting or underlining and must indicate only the specific words, figures, or paragraphs that constitute trade secret or proprietary information. Va. Code § 2.2-4342(F) prohibits an Offeror from classifying an entire proposal, any portion of a proposal that does not contain trade secrets or proprietary information, line item prices, or total proposal prices as proprietary or trade secrets. If, after being given reasonable time, the Offeror refuses to withdraw such classification(s), the proposal will be rejected.

SECTION / TITLE	PAGE NUMBER(S)	REASON(S) FOR WITHHOLDING FROM DISCLOSURE
n/a		

Informal Request for Proposal
Business and Information Technology Software for HCPS
Workforce and Career Development Students
HENRICO COUNTY PUBLIC SCHOOLS

I. INTRODUCTION

A. Purpose:

The purpose of this informal request for proposal (iRFP) is to solicit proposals for an annual contract(s) for Henrico County Public Schools (HCPS) to provide a web-based platform that teaches Computer Science coding concepts through game creation and/or modules and simulation. Multiple awards/contracts may result from this iRFP to accommodate the need of the Business and IT classes offered by HCPS.

B. Background:

HCPS is a large metropolitan school district with approximately 50,000 students in 73 schools for the 2020-21 school year. This includes 46 elementary schools, 12 middle schools, 9 high schools, 2 technical centers, 3 program centers, and one preschool.

II. SCOPE OF SERVICES

A. General Requirements:

1. The proposed solution shall provide:

    a. A web-based platform that teaches computer science concepts and coding. The web-based platform should scaffold learning, limit downloadable materials, and include a game or story element to engage students.

    b. Teacher resources that include:
        1. Printable lesson plans
        2. Recommended pacing guide for teaching
        3. Student activities or extension projects with instructor solutions
        4. Auto-graded assignments

    c. Student modules for learning that are locked/opened at teacher's discretion

    d. A product that is aligned to computer science and/or Virginia CTE standards

    e. A product where the content is appropriate for diverse middle school students, grade 6-8 with separate, additional content available and appropriate for diverse high school students, grades 9-12

    f. Technical support for all users, including real-time assistance if needed during class time.

    g. A toll-free number for help desk support to HCPS at a minimum from 8 am to 5 pm EST, Monday-Friday.

h. Dedicated account representative to manage licenses and to review the usage data with content specialist.

2. The successful bidder shall provide teacher training – one-hour minimum training in a synchronous, virtual format to introduce teachers to the platform, inform how to find and use instructor materials, and answer questions.

3. Contact Period
   a. The contract period shall be from August 1, 2021 through July 31, 2022. Contract prices shall remain firm for the contract period.

   b. The contract may be renewed for four (4) additional one-year periods upon the sole discretion of the County at a price not to exceed 3% above the previous year's prices.

   c. The resulting contract should require the Successful Offeror to give at least a ninety (90) day written notice if they do not intend to renew the contract at any annual renewal.

   d. The contract shall not exceed a maximum of five (5) years.

B. Technical Specifications:

User Interface

1. Browser Support – the proposed solution shall:
   a. Have compatibility with the current versions of multiple browsers- at minimum, current versions of Edge, Safari, and Chrome browsers.
   b. Maintain compatibility with listed browsers and future versions/updates/releases of the listed browsers for the duration of the contract.
   c. Only require standard browser plugins.

2. The proposed solution will be compliant with the Americans with Disabilities Act requirements for accessibility.

3. The proposed solution shall be cloud-based and delivered via the Internet over wireless LANs to the client's browser.

4. The proposed solution shall provide an intuitive user interface that allows for ease of use by teachers and students.

5. The proposed solution shall support mobile technology including but not limited to the specific mobile devices currently used in HCPS (iOS, Chromebooks, and Android Platforms)

Integration

1. The proposed solution shall provide methods for user account administration that are easy to use and maintain.

2. The proposed solution shall support a single sign-on solution that does not require staff or students to have a separate account or password for accessing the vendor's application.

3. The proposed solution shall allow for LTI, Azure Active Directory or LDAP as a method of authentication and authorization.

4. The proposed solution shall provide a means to identify the individual or client using the application, authenticate the individual and determine the authorities and rights granted to that individual as well as a reporting engine for tracking usage and progress.

5. Any requirements for student, staff, course, roster or school information must be supported through a common specification. The exchange of data must be through a common protocol and not require the installation of vendor-specific software in the HCPS internal infrastructure. HCPS currently supports the following means of exchanging student information in order of preference but will accept other non-vendor specific protocols:
   a. LTI integration as a Tool Provider (TP) with our LMS Solution (Schoology)
   b. SIF - Student Information framework
   c. Exchange of information through Clever - a third party vendor for exchanging common data for school systems; The Successful Offeror is responsible for any costs incurred with Clever implementation.
   d. API integration with our SIS, PowerSchool
   e. File exchange to a vendor-supported sFTP server

6. No additional fees may be charged to HCPS for data integration

7. The proposed data exchange solution must be described in detail in the Offeror's response. The proposed solution must also include limitations the Offeror has such as the number of teachers for a class and the number of schools associated with teachers and students.

8. Solutions that allow for seamless integration of their product through the IMS Global interoperability standards are preferred.

Infrastructure and System Administration

1. Offerors shall provide:
   a. Details of the hosting environment including hosting provider, service level agreements between the offeror and the hosting provider, and length of the relationship between the offeror and the hosting provider.
   b. Specifics of structures in place to ensure high availability including redundant Internet paths, hardware failover, scalability, and protection against denial of service attacks or other network threats.
   c. Specifics of security measures in place to ensure that district data is secure during both storage and transit.
   d. SOC 2 compliance status (certification documentation should be provided)
   e. Specifics of structures in place to ensure acceptable disaster recovery including backup schedules and redundancy.
   f. Internet Bandwidth requirements and provide a per-user bandwidth usage specification of the software product.
   g. Specifics of the availability of remote access to the district's data outside of the web-based application.
   h. Specifics on the frequency and duration of operating system and application updates including the procedures used to inform the district of maintenance windows and system downtime for these tasks.
   i. Any tools available to measure system responsiveness.
   j. Any limits on data storage (i.e. user quotas, access to previous year data, database size, etc.).
2. The proposed solution shall be deployed on servers and equipment hosted or administered by the Successful Offeror. Hosting the solution on a 3rd party, such as Amazon or Azure, is acceptable.

3. The proposed solution will provide a secure, web-based system for data in transit and at rest.

4. Successful Offeror(s) will document compliance with all local, state, and federal laws related to student data privacy.

5. The proposed solution shall contain neither commercial content nor serve as a vehicle to market goods and services.

Web Accessibility

1. The solution shall be accessible to persons with disabilities, including:
    a. Blindness, color blindness, visual impairment
    b. Deafness, hearing impairment
    c. Speech impairment
    d. Mobility, strength, dexterity, or reach impairment

2. The solution shall support the use of commonly available screen readers.

3. The solution shall comply with Federal Web Accessibility Standards (part of Section 508 of the Rehabilitation Act).

4. The solution shall meet Level A and Level AA guidelines as specified by the W3C's WCAG 2.0 guidelines.

5. The proposed solution shall be able to handle at least 60,000+ concurrent HCPS users with less than 30 ms latency. Offeror(s) must provide comprehensive documentation to evidence the ability to accommodate concurrent users based on data collected from a similar environment

6. If the solution is reliant on LDAP authentication, HCPS will only accept a defined external IP address to allow Firewall transactions and will not accept the allowance of entire network segments.

7. HCPS shall have the ability to submit requests for an alteration of the digital content (including additional supporting data, modification of current data, or removal of data deemed inappropriate by HCPS) via email or web-based forms embedded in the digital content.

8. Provide all documentation for each piece of software equipment, or software, including copyright information, all operator and user manual, training materials necessary for the proper and successful use of the software where an installation or configuration on HCPS network or devices are required.

Computer, Software, and Network Specifications:

The proposed solution shall meet all performance requirements defined in this document and be currently compatible with the following minimum computer specifications as well as maintaining compatibility with updates/patches/versions of listed software for the duration of the contract (at a minimum beginning with the versions listed below)

1. Staff District-wide; All High, Middle Students and limited numbers for Elementary Students
    a. Windows Laptop
        i. Software
            1. OS – Windows 10, 1903 or higher: 64-bit
            2. Browsers – Google Chrome 86.x or above; Microsoft Edge 89.x or above
            3. Java – 1.8.0_251 or above
            4. PDF Reader - embedded within Google Chrome and Microsoft Edge
            5. Adobe Reader - standalone application
            6. Adobe Shockwave – 12.2 or above

7. O365 Pro Plus

ii. Hardware:

1. Latitude 3380s model:
    a. Specifications
        i. Display - 13.3-inch HD Anti-Glare LED with integrating webcam and noise reducing array microphone
        ii. Hard drive - 128GB SSD
        iii. Processor - 2.50 GHz Intel® i5 -Dual Core
        iv. Memory - 8GB DDR3 SDRAM
        v. Graphics Card – 128MB Dedicated VRAM; 1366X768 - Native Resolution
        vi. Network Connections: Built-in Wireless Card (802.11ac) and 10/100/1000 Gigabit Ethernet
    b. Other:
        i. Stereo headphone/Microphone combo jack
2. Latitude 5420 model:
    a. Specifications
        i. Display - 14" FHD (1920x1080) Non-Touch, Anti-Glare, IPS, 250nits, WLAN/WWAN, HD Camera
        ii. Hard drive – 128GB PCIe NVMe Class 35 SSD
        iii. Processor – 11th Generation Intel® Core™ I3-1125G4 (4 Core, 8M cache, base 2.0GHz, up to 3.7GHz)
        iv. Memory – 8GB DDR4 Non-ECC
        v. Network connections - Intel® Wi-Fi 6 AX201 2x2 .11ax 160MHz + Bluetooth 5.1
        vi. Graphic cards - I3-1125G4 Trans, Intel UHD Graphics, Thunderbolt
3. Latitude 3310 model
    a. Specifications:
        i. Display – 13.3" HD (1366 x 768) Anti-Glare Non-Touch, Camera & Microphone, WLAN Capable
        ii. Hard drive – 128GB PCIe NVMe Class 35 SSD
        iii. Processor – 8th Generation Intel® Core™ i5-8265U Processor (4 Core, 6MB Cache,1.6GHz,15W)
        iv. Memory – 8GB DDR4 Non-ECC
        v. Network Connections - Intel Dual Band Wireless Driver 9560 (802.11ac) 2x2 + Bluetooth 5.0; Intel® Dual Band Wireless AC 9560 (802.11ac) 2x2 + Bluetooth 5.0
        vi. Graphics card - Intel® Core™ i3-8145U Processor w/Intel® HD Graphics 620
4. Latitude 3180 Education model – Elementary Carts:
    a. Specifications:
        i. Display - 11-inch HD with integrated webcam
        ii. Hard drive - 64GB eMMC Storage - Hard drive
        iii. Processor - Intel® Pentium® N4200
        iv. Memory - 4GB 1600MHz LPDDR3
        v. Video Card – Intel integrated HD graphics 4600
        vi. Network Connections – Intel Dual Band Wireless-AC 7265 802.11AC Wi-Fi + BT 4.0 LE Wireless Card (2x2)
    b. Other:
        i. 2 speakers
        ii. 1 Combo headphone/microphone jack

iii. USB card reader

b. Chromebooks (primary device for elementary students, Grades 1st-5th)
   i. Software
      1. Chromium OS 86.x+ or above
   ii. Hardware:
      1. Dell Chromebook 3180 (touch & non-touch):
         a. Specifications:
            i. Display - 11.6-inch HDF
            ii. Hard drive - 16GB eMMC
            iii. Processor - Celeron N3060
            iv. Memory - 4GB
            v. Video Card - Intel integrated HD graphics 4600
            vi. Network - Built-in Wireless Card (802.11a/g/n)
         b. Other:
            i. 2 speakers
            ii. Headphone/Microphone jack
            iii. Integrated webcam
      2. Dell Chromebook 3100 (touch & non-touch):
         a. Specifications:
            i. Display - 11.6" HD (1366 x 768) Anti-Glare Non-Touch, Camera & Microphone, WLAN Capable - Display
            ii. Hard drive - 16GB eMMC
            iii. Processor - Intel Celeron N4020 (Dual Core, up to 2.8GHz, 4M Cache, 6W) 1 USB Type-C, 1 USB 3.1
            iv. Memory - 4GB 2400MHz LPDDR4 Non-ECC

c. iOS Devices – Elementary (primary device for PreK-K) and Secondary
   i. Software
   ii. iOS version - 14.x
   iii. Safari browser
   iv. Hardware (Based on iPad MR7F2LL/A)
   v. Specifications:
   vi. Display - 9.7-inch (diagonal) LED-backlit, multi-touch with IPS technology
   vii. Storage – 32GB
   viii. Wireless-A, Wireless-AC, Wireless-B, Wireless-G, Wireless-N
   ix. Bluetooth 4.2 Technology
   x. Camera, Photos, and Video Recording

Networking Environment

1. Location WAN Circuit Bandwidth
   a. 1 Gbps or greater Comcast ENS Data WAN Circuit to High Schools.
   b. 1 Gbps or greater Comcast ENS Data WAN Circuit to Middle Schools.
   c. 500 Mbps or greater Comcast ENS Data WAN Circuit to Elementary Schools.
   d. 100 Mbps or greater Comcast ENS Data WAN Circuit to remote Administrative sites.
2. District Internet Bandwidth
   a. (2) 8 Gbps Comcast ENI circuits to provide a total district bandwidth of 16 Gbps of Internet Service to the Data Center which is then distributed to the entire district via the size and type of WAN circuits listed above.
3. Local Area Network and Wireless Infrastructure

a. All Schools/Sites utilize either 1 Gbps or 10 Gbps fiber backbone connections between their MDF & IDF's network closets.
b. All Schools/Sites utilize a combination of LightWeight or Cloud-Controlled wireless access points capable of supporting the IEEE 802.11 ac wireless standard and are connected at 1 Gbps, or greater, to Cisco Catalyst 9200 & 9300 series POE switches.

III. COUNTY RESPONSIBILITIES

The County will designate an individual to act as the County's representative with respect to the work to be performed under this contract. Such individual shall have the authority to transmit instructions, receive information, and interpret and define the County's policies and decisions with respect to the contract.

IV. PROPOSAL RESPONSE FORMAT

1. Executive Summary

   Company Profile - Offerors are to present a Company profile that shows the ability, capacity and skill of the Offeror, their staff, and their employees to perform the services required within the specified time. Include the following information.

   a) Years in business outlining the company history and experience providing progress monitoring systems for K-12
   b) Experience with a project of this magnitude
   c) Experience in K-12 market
   d) Diagram of the Offeror's network topology as well as that of the Offeror's ISP if applicable.
   e) Number of employees proposed for the development and ongoing processes including training

2. References - Provide a minimum of three (3) references who could attest to the Offeror's past performance to provide services similar to those required for the contract. The list should include contact persons and telephone numbers. Offerors may not use Henrico County as one of their references.

5. Subconsultants - (If Applicable) Information on any sub-consultants that is necessary to provide the services required. Provide name, experience, address, telephone number and qualifications.

6. The proposed solution must be described in detail in the Offeror's response. Offerors must also include limitations the Offeror has, such as the number of teachers for a class and the number of schools associated with teachers and students.

7. Offeror(s) must provide comprehensive documentation to evidence the ability to accommodate concurrent users based on data collected from a similar environment.

8. Discuss the Offeror's current workload and the ability to provide the operational products by August 1, 2021.

9. Provide samples and descriptions of reports offered and the ability to customize content and reports.

15. Offerors shall provide a "sandbox" environment for any proposed solution for the committee to use for evaluation. If the "sandbox" environment is not available, offerors shall provide screenshots of the product with their proposal.

16. Offerors shall provide a detailed explanation of how accounts are maintained in their system and how they support automated provisioning of users and accounts.

17. Offerors shall describe in detail the proposed solutions data exchange process.

18. Offerors shall provide the per user bandwidth requirements for their proposed solution. Provide the average bandwidth per student required for the proposed solution.

19. Offerors shall submit any agreements to which HCPS may be requested to agree to as part of a final award.
    a) Include any terms and conditions the "end user" is required to accept.
    b) Discuss how your firm handles parental consent, if required.

20. Offerors shall provide a detailed timeline for implementation of the project indicating resources (responsible party) and completion dates.

21. Pricing – Complete the scenario provided in Attachment C. Also provide detailed pricing for all costs associated with providing the services outlined in Section II. Scope of Services. List all categories separately, itemized for evaluation, such as subscription costs, training of County staff, Professional Development at a minimum. Provide details if tiered pricing is available. **Attachment C.**

22. Offers shall provide evidence of financial stability.

23. Provide copies of any contract documents, SaaS Service Level Agreement (SLA), etc. that would be needed to be signed by the County if awarded the contract including any service or business agreements.

24. Assumptions - List any assumptions made when responding to the Scope of Services requirements.

25. Exceptions - List any exceptions to the Scope of Services and General Terms and Conditions in a separate section of the Offeror's proposal response and mark the section as "Exceptions", except for exceptions to liability provisions contained in the Request for Proposal.

26. Appendices - Optional for Offerors who wish to submit additional material that will clarify their response.

ATTACHMENT A

COUNTY OF HENRICO

INSURANCE SPECIFICATIONS

The following insurance coverages and limits are required in order to provide goods, services, construction, professional and non-professional services to Henrico County general government agencies and Henrico County Public Schools. These requirements are specific to this procurement and may or may not be the same for future requests.

Please be sure and review the Additional Requirements Section

The Successful Bidder/Offeror shall carry Public Liability Insurance in the amount specified below, including contractual liability assumed by the Successful Bidder/Offeror, and shall deliver a Certificate of Insurance from carriers licensed to do business in the Commonwealth of Virginia and that is representative of the insurance policies. The Certificate shall show that the policy has been endorsed to add the County of Henrico and Henrico County Public Schools named as an additional insured for the Commercial General Liability coverage. ***The certificate must not show in the description of operations section that it is issued specific to any bid, job, or contract.*** The coverage shall be provided by a carrier(s) rated not less than "A-" with a financial rating of at least VII by A.M. Best or a rating acceptable to the County. In addition, the Successful Bidder/Offeror shall agree to give the County a minimum of 30 days prior notice of any cancellation or material reduction in coverage.

Workers' Compensation

Statutory Virginia Limits
Employers' Liability Insurance - $100,000 for each Accident by employee
$100,000 for each Disease by employee
$500,000 policy limit by Disease

Commercial General Liability

$1,000,000 each occurrence including contractual liability for specified agreement
$2,000,000 General Aggregate (other than Products/Completed Operations)
$2,000,000 General Liability-Products/Completed Operations
$1,000,000 Personal and Advertising injury
$ 100,000 Fire Damage Legal Liability

Business Automobile Liability – including owned, non-owned and hired car coverage

Combined Single Limit - $1,000,000 each accident

Umbrella Liability

$2,000,000 Per Occurrence and in the aggregate

Additional Requirements

In addition to the requirements above, the Successful Bidder/Offeror shall thoroughly review the scope of work that is included and if any of the following are included in the services that will be provided, the following additional insurance will be required, if required:

☐ **Professional Liability - $2,000,000 Per Occurrence (or limit in accordance with Statute for Medical Professional)**
Required if the Scope includes providing advice or consultation including but not limited to; lawyers, bankers, physicians, programming, design (including construction design), architects & engineers and others who require extensive education and/or licensing to perform their duties.

☒ **Cyber Liability - $2,000,000 Per Occurrence**
Required if the Scope includes the collection and electronic transmittal of Personal Health Insurance (PHI), or any other demographic data on individuals including but not limited to Name, Address, Social Security Numbers or any other sort of personally identifying information.

☐ **Abuse and Molestation Coverage - $1,000,000 Per Occurrence**
Required if the scope of work includes the offering of professional or non-professional services to any child or student where one on one contact or consultation is to be provided.

☐ **Pollution Liability - $1,000,000 Per Occurrence**
Required if the scope of work involves the use (other than in a motor vehicle) or removal of a substance or energy introduced into the environment that potentially has an undesired effect or affects the usefulness of a resource. These include, but are not limited to Asbestos, PCB's, Lead, Mold, and Fuels.

☐ **Explosion, Collapse & Underground Coverage (XCU)**
Required of a Contractor in limits equal to the General Liability Limit when the Scope includes any operations involving Blasting, any work underground level including but not limited to wires, conduit, pipes, mains, sewers, tanks, tunnels, or any excavation, drilling, or similar work.

☐ **Builders Risk Coverage**
Required if the scope of work includes the ground up construction of a structure. Limit of insurance shall be 100% of the completed value of the structure. For projects for the renovation of an existing structure, The County shall insure the Builder's Risk with the Contractor being responsible for the first $10,000 of any claim.

☐ **Other as Specified Below**

_____

NOTE 1: The commercial general liability insurance shall include contractual liability. The contract documents include an indemnification provision(s). The County makes no representation or warranty as to how the Bidder/Offeror's insurance coverage responds or does not respond. Insurance coverages that are unresponsive to the indemnification provision(s) do not limit the Bidder/Offeror's responsibilities outlined in the contract documents.

NOTE 2: The intent of this insurance specification is to provide the coverage required and the limits expected for each type of coverage. With regard to the Business Automobile Liability and Commercial General Liability, the total amount of coverage can be accomplished through any combination of primary and excess/umbrella insurance. This insurance shall apply as primary insurance and non-contributory with respect to any other insurance or self-insurance programs afforded the County of Henrico and Henrico County Public Schools. This policy shall be endorsed to be primary with respect to the additional insured.

NOTE 3: Title 65.2 of the Code of Virginia requires every employer who regularly employs three or more full-time or part-time employees to purchase and maintain workers' compensation insurance. If you do not purchase a workers' compensation policy, a signed statement is required documenting that you are in compliance with Title 65.2 of the Code of Virginia.

NOTE 4: The Certificate Holder Box shall read as follows:

County of Henrico
Risk Management
PO Box 90775
Henrico, VA 23273

ATTACHMENT B
DIRECT CONTACT WITH STUDENTS

Name of Bidder: CodeCombat Inc.

Pursuant to Va. Code § 22.1-296.1, as a condition of awarding a contract for the provision of services that require the contractor or employees of the contractor to have direct contact with students on school property during regular school hours or during school-sponsored activities, the contractor shall provide certification of whether any individual who will provide such services has been convicted of any violent felony set forth in the definition of barrier crime in subsection A of Va. Code § 19.2-392.02; any offense involving the sexual molestation, physical or sexual abuse, or rape of a child; or any crime of moral turpitude.

Any individual making a materially false statement regarding any such offense is guilty of a Class 1 misdemeanor and, upon conviction, the fact of such conviction is grounds for the revocation of the contract to provide such services and, when relevant, the revocation of any license required to provide such services.

As part of this submission, I certify the following:

☒ **None of the individuals who will be providing services that require direct contact with students on school property during regular school hours or during school-sponsored activities have been convicted of a violent felony set forth in the definition of "barrier crime" in Va. Code § 19.2-392.02(A); an offense involving the sexual molestation, physical or sexual abuse, or rape of a child;**

And (select one of the following)

☒ **None of the individuals who will be providing services that require direct contact with students on school property during regular school hours or during school-sponsored activities have been convicted of any felony or any crime of moral turpitude.**

or

☐ **One or more individuals who will be providing services that require direct contact with students on school property during regular school hours or during school-sponsored activities has been convicted of a felony or crime of moral turpitude that is not set forth in the definition of "barrier crime" in Va. Code § 19.2-392.02(A) and does not involve the sexual molestation, physical or sexual abuse, or rape of a child. (In the case of a felony conviction meeting these criteria, the contractor must submit evidence that the Governor has restored the individual's civil rights.).**

Nicholas Winter

Signature of Authorized Representative

Nicholas Winter, CEO

Printed Name of Authorized Representative

CodeCombat Inc.

Printed Name of Vendor

ATTACHMENT C

PRICING OPTIONS

Provide pricing for the scenario below based off pricing being offered

Scenario	Price
Provide pricing for an annual subscription for one site licenses for a high school for 149 Business students	$
Virtual training for 25 teachers (minimum one hour)	$

Provide pricing as it relates to the proposed solution

	Price
Price per Student (provide details if tiered pricing is offered)	$
Price per Teacher	$
Price per Classroom	$
Price per Site	$
Price for District License 6-12	$
Virtual training to introduce teachers to the platform, inform how to find user instructor materials and answer questions.	$
Additional Professional Development models	$
Printed materials – provide list of pricing for each product offered	$
Consumables – provide list of pricing for each product offered	$

(*ATTACHMENTS D AND E SHALL BE REQUIRED TO BE COMPLETED BY THE SUCCESSFUL OFFER)

ATTACHMENT D
LICENSE AGREEMENT ADDENDUM

The County of Henrico, Virginia (the "**County**"), a political subdivision of the Commonwealth of Virginia, and CodeCombat Inc. ("**Supplier**"), a corporation, are this day entering into an agreement for [title of wraparound contract/RFP/etc.] (the "**Agreement**") and, for their mutual convenience, the parties are using the standard form contract ("[title of Supplier's form: EULA, etc.]") provided by Supplier ("**Contract**"). This License Agreement Addendum ("**LAA**"), duly signed by the County and Supplier (each a "**Party**"), is attached to and made a part of the Agreement and the Contract by incorporation, and with the Agreement governs the use of any and all software licensed by the County under the Agreement (the "**Software**") and this LAA.

As used in this LAA, the term "**Contract**" means the Supplier's standard form contract and any and all exhibits and attachments thereto. The term(s) "**Customer**", "**You**" or "**you**" as used in the Contract and this LAA, means, as applicable,the County, or any of their officers, directors, agents or employees.

Supplier represents and warrants that it is a corporation authorized to do in business in Virginia. If Supplier is not a U.S.-based entity, Supplier maintains a registered agent and a certification of authority to do business inVirginia.

Supplier's Contract is generally acceptable to the County, with the exceptions noted in this LAA below. Despite the general acceptability of the Contract, certain standard clauses may appear in, or be incorporated by reference into, the Contract that cannot be accepted by the County. In consideration of the convenience of using Supplier's standard form contract without the necessity of specifically negotiating a separate contract document, the Parties specifically agree that any of the following provisions contained in the Contract are deemed void and will not have any effect and will not be enforceableagainst any Customer:

1. Requiring the application of the law of any state other than the Commonwealth of Virginia in interpreting or enforcing the Contract or requiring or permitting that any dispute under the Contract be resolved in any court other than the state courts located in Henrico County, Virginia;
2. Requiring any total or partial compensation or payment for lost profit or liquidated damages by any Customer if the Contract is terminated before the end of its ordinary term;
3. Imposing any interest charge(s) contrary to that specified by § 2.2-4347 *et seq.* of the Code of Virginia;
4. Requiring the County to maintain any type of insurance for Supplier's benefit;
5. Granting Supplier a security interest in any property of the County;
6. Requiring the County to indemnify, defend, or to hold harmless Supplier for any act or omission;
7. Limiting or adding to the time period within which claims can be made or actions can be brought (Reference Tit. 8.01 of the Code of Virginia);
8. Limiting selection and approval of counsel and approval of any settlement in any claim arising under the Contract and in which the County is a named party;
9. Binding the County to any arbitration or to the decision of any arbitration board, commission, panel or other entity;
10. Obligating the County to pay costs of collection or attorney's fees;
11. Requiring any dispute resolution procedure(s) other than those in accordance with § 2.2-4363 *et seq.* of the Code of Virginia;
12. Permitting Supplier to access any of the County's records or data, except pursuant to court order;
13. Permitting Supplier to use any information provided by the County except for Supplier's own internal administrative purposes;
14. Requiring the County to limit its rights or waive its remedies at law or in equity;

15. Bestowing any right, or incurring any obligation, that is beyond the duly granted authority of the undersigned representative of the County to bestow, or incur, on behalf of the County;
16. Establishing a presumption of severe or irreparable harm to Supplier by the actions or inactions of the County;
17. Limiting the liability of Supplier for property damage, death, or personal injury;
18. Permitting Supplier to assign, subcontract, delegate or otherwise convey the Contract, or any of its rights and obligations under the Contract, to any entity without the prior written consent of the County, except as set forth in paragraph 39 below;
19. Not complying with the contractual claims provision § 2.2-4363 of the Code of Virginia, which is also incorporated into this LAA and the Contract by reference;
20. Enforcing the United Nations Convention on Contracts for the International Sale of Goods and all other laws and international treaties or conventions relating to the sale of goods. They are expressly disclaimed. UCITA shall apply to the Contract only to the extent required by § 59.1-501.15 of the Code of Virginia;
21. Not complying with all applicable federal, state, and local laws, regulations, and ordinances;
22. Requiring that the County waive its sovereign immunity or its immunity;
23. Requiring that the County, which is tax exempt, be responsible for payment of any taxes, duties, or penalties;
24. Requiring or construing that any provision in this Contract conveys any rights or interest in the County's data to Supplier;
25. Requiring the use of foreign currency. The currency used for the Contract will be United States Dollars;
26. Obligating the County beyond approved and appropriated funding. All payment obligations from the County under the Contract are subject to receipt of necessary appropriations from the County's Board of Supervisors. In the event of non-appropriation of funds for the items under the Contract, the County may terminate, in whole or in part, the Contract or any order, for those goods or services for which funds have not been appropriated. This may extend to the renewal of maintenance services for only some of the licenses granted by Supplier. The County shall provide written notice to the Supplier as soon as possible after legislative action is completed. There will be no time limit for termination due to termination for lack of appropriations;
27. Permitting unilateral modification of the Contract by Supplier;
28. Permitting termination by Supplier of the Contract or the licenses granted pursuant to the Contract, or permitting suspension of services by Supplier, except pursuant to an order from a court of competent jurisdiction;
29. Requiring or stating that the terms of the Supplier's standard form contract will prevail over the terms of this LAA in the event of conflict;
30. Renewing or extending the Contract beyond the term set forth in the Agreement or automatically continuing the Contract period from term to term;
31. Requiring that the Contract be "accepted" or endorsed by the home office or by any other officer subsequent to signing by an official of the County before the Contract is considered in effect;
32. Delaying the acceptance of the Contract or its effective date beyond the date of signing;
33. Defining "perpetual" license rights to have any meaning other than license rights that exist in perpetuity unless otherwise terminated in accordance with the applicable provisions of the Contract;
34. Permitting modification or replacement of the Contract pursuant to any new release, update or upgrade of Software, or subsequent renewal of maintenance. If Supplier provides any update or upgrade subject to additional payment, the County will have the right to reject such update or upgrade;
35. Requiring the purchase of a new release, update, or upgrade of Software, or subsequent renewal of maintenance, in order for the County to receive or maintain the benefits of Supplier's indemnification of the County against any claims of infringement on any third-party intellectual property rights;
36. Prohibiting the County from transferring or assigning to any entity the Contract or any license to Software granted pursuant to the Contract;
37. Granting Supplier or an agent of Supplier the right to audit or examine the books, records, or accounts of the County; or

In addition to the provisions set forth above in this LAA, the Parties further agree as follows:

38. Supplier warrants that it is the owner of the Software or otherwise has the right to grant to the County the license to use the Software granted under the Contract without violating or infringing any law, rule, regulation, copyright, patent, trade secret, or other proprietary right of any third party.
39. Supplier may assign all or any of its rights and obligations to a third party as a result of a merger or acquisition or sale of all or substantially all of its assets to the third party so long as Supplier's assignee agrees in writing to be bound by the terms and conditions set forth in the Contract, and provided the third party is a U.S.-based entity or

maintains a registered agent and a certification of authority to do business in Virginia. Supplier may assign all or any of its rights and obligations to an affiliate of Supplier, provided Supplier remains liable for the affiliate's compliance with the terms and conditions set forth in this Contract

40. Supplier agrees to indemnify, defend and hold harmless the County of Henrico (including Henrico County Public Schools), the County's officers, agents and employees, from any claims, damages, suits, actions, liabilities and costs of any kind or nature, including attorneys' fees, to the extent the claim in any way relates to, arise out of or result from: (i) any negligent act, negligent omission, or intentional or willful conduct of any employee or subcontractor of Supplier, (ii) any breach of any representation, warranty or covenant of Supplier contained in the Contract and LAA, (iii) any defect in the Software, or (iv) any actual or alleged infringement or misappropriation of any third party's intellectual property rights by any of the Software.
41. The County will only be liable to pay for Supplier's travel-related expenses, including transportation, meals, lodging and incidental expenses that have been authorized by the County in advance. The travel-related expenses will be reimbursable at the County's then-current per diem rates.
42. The County may require that Supplier personnel submit to a criminal background check prior to performance of any services under the Contract.
43. Payments for license fees, including subscription fees, and support services are only authorized to be made to the Supplier pursuant to the Contract.

Together with the Agreement, the Contract and this LAA constitute the entire agreement between the Parties and may notbe waived or modified except by written agreement between the Parties.

IN WITNESS WHEREOF, the Parties have caused this License Agreement Addendum to be duly executed as of the last dateset forth below by the undersigned authorized representatives of the parties, intending thereby to be legally bound.

Supplier Name CodeCombat Inc.	**County of Henrico, Virginia**
By: Nicholas Winter (Signature)	By: _____ (Signature)
Name: Nicholas Winter (Print)	Name: _____ (Print)
Title: CEO	Title: _____
Date: June 22, 2021	Date: _____

ATTACHMENT E

HENRICO COUNTY PUBLIC SCHOOLS DATA SECURITY AGREEMENT

This Data Security Agreement ("Agreement") is agreed upon effective June 22, 2021 _____, , by and between CodeCombat Inc. ("Vendor") and the County School Board of Henrico County, Virginia ("School Board" or "HCPS").

I. DEFINITIONS

A. **HCPS Data**: HCPS Data is any and all data that HCPS has disclosed to Vendor. For the purposes of this Agreement, HCPS Data does not cease to be HCPS Data solely because it is transferred or transmitted beyond HCPS's immediate possession, custody, or control.

B. **Data Breach**: The unauthorized access and acquisition of computerized data that materially compromises the security or confidentiality of confidential or sensitive personal information maintained by HCPS as part of a database of personal information regarding multiple individuals and that causes or HCPS reasonably believes has caused or will cause loss or injury to any HCPS constituent.

C. **System**: An assembly of components that supports an operational role or accomplishes a specific objective. This may include a discrete set of information resources (network, server, computer, software, application, operating system or storage devices) organized for the collection, processing, maintenance, use, sharing, dissemination, or disposition of information.

D. **Contract**. Shall mean the contract between Vendor and HCPS outlining the services to be provided.

II. DISCLOSURE OF HCPS DATA

A. The Vendor shall not disclose HCPS Data in any manner that would constitute a violation of state or federal law or the terms of this agreement including, without limitation, by means of outsourcing, sharing, retransfer, or access, to any person or entity, except:

B. Employees or agents who actually and legitimately need to access or use HCPS Data in the performance of Vendor's duties to HCPS;

C. Such third parties, such as but not limited to, vendors, suppliers or subcontractors, but only after such third party has agreed in writing and in advance of any disclosure, to be bound by confidentiality terms at least as stringent as the terms of this Agreement; or

D. Any other third party approved by HCPS in writing and in advance of any disclosure, but only to the extent of such approval.

E. The Vendor may also store HCPS Data on servers housed in datacenters owned and operated by third parties, provided the third parties take reasonable precautions to protect the security and confidentiality of HCPS data.

III. USE OF, STORAGE OF, OR ACCESS TO HCPS DATA

A. Vendor shall only use, store, or access HCPS data:

1. In accordance with, and only to the extent permissible under the contract for services; and

2. In full compliance with any and all applicable laws and regulations, only to the extent applicable to Vendor, including the Family Educational Rights and Privacy Act (FERPA); and

B. Vendor agrees that the use, storage, and access to HCPS Data shall be performed with that degree of skill, care, and judgment customarily accepted as sound, quality, and professional practices. Vendor shall implement and maintain safeguards necessary to ensure the confidentiality, availability, and integrity of HCPS Data. Vendor shall also implement and maintain any safeguards required to be implemented by applicable state and federal laws and regulations.

C. HCPS reserves the right to request security information reasonably necessary to ascertain HCPS's own compliance with state and federal data privacy laws.

D. If Vendor becomes aware that HCPS Data may have been accessed, disclosed, or acquired without proper authorization and contrary to the terms of this Agreement or the Contract, Vendor shall use reasonable efforts to alert HCPS of any Data Breach within two business days, and shall immediately take such actions as may be necessary to preserve forensic evidence and eliminate the cause of the Data Breach. Vendor shall give highest priority to immediately correcting any Data Breach and shall devote such resources as may be required to accomplish that goal. Vendor shall provide HCPS information necessary to enable HCPS to fully understand the nature and scope of the Data Breach. Upon request, Vendor shall provide HCPS information about what Vendor has done or plans to do to mitigate any deleterious effect of the unauthorized use or disclosure of, or access to, HCPS Data. In the event that a Data Breach requires Vendor's assistance for mitigation, such assistance shall be provided at no cost to HCPS. HCPS may discontinue any services or products provided by Vendor and any payments to Vendor until HCPS, in its sole discretion, determines that the cause of the Data Breach has been sufficiently mitigated.

E. If Vendor is served with any subpoena, discovery request, court order, or other legal request or command that calls for disclosure of any HCPS Data, Vendor shall promptly notify HCPS in writing and provide HCPS sufficient time to obtain a court order or take any other action HCPS deems necessary to prevent disclosure or otherwise protect HCPS Data. In such event, Vendor shall provideHCPS prompt and full assistance in HCPS's efforts to protect HCPS Data. Where Vendor is prohibited by law from notifying HCPS of a legal request for HCPS Data, Vendor will comply with all applicable laws and regulations with respect to the requested HCPS Data.

F. Upon expiration or termination of the Contract, Vendor shall ensure that no Data Breach occurs and shall follow HCPS's instructions as to the preservation, transfer, or destruction of HCPS Data. The method of destruction shall be accomplished by "purging" or "physical destruction", in accordance with National Institute of Standards and Technology (NIST) Special Publication 800-88. Upon requestby HCPS, Vendor shall certify in writing to HCPS that return or destruction of data has been completed. Prior to such return or destruction, Vendor shall continue to protect HCPS Data in accordance with this Agreement.

G. This Agreement shall survive the expiration or earlier termination of the Contract. However, upon expiration or termination of the Contract, either party may terminate this Agreement.

FOR HCPS:	FOR VENDOR:
_____	Nicholas Winter
Name	Name
_____	Nick Winter
Signature	Signature
_____	CEO
Title	Title
_____	June 22, 2021
Date	Date

Attachment F

Henrico County Public Schools Middle and High School Locations

Middle Schools
BROOKLAND - 9200 Lydell Drive, Henrico, VA 23228
BYRD - 9400 Quioccasin Road, Henrico, VA 23238
ELKO - 5901 Elko Road, Sandston, VA 23150
FAIRFIELD - 5121 Nine Mile Road, Henrico, VA 23223
HOLMAN - 600 Concourse Boulevard, Glen Allen, VA 23059
HUNGARY CREEK - 4909 Francistown Road, Glen Allen, VA 23060
MOODY - 7800 Woodman Road, Henrico, VA 23228
POCAHONTAS - 12000 Three Chopt Road, Henrico, VA 23233
ROLFE - 6901 Messer Road, Henrico, VA 23231
SHORT PUMP - 4701 Pouncey Tract Road, Glen Allen, VA 23059
TUCKAHOE - 9000 Three Chopt Road, Henrico, VA 23229
WILDER - 6900 Wilkinson Road, Henrico, VA 23227
High Schools
DEEP RUN - 4801 Twin Hickory Road, Glen Allen, VA 23059
FREEMAN - 8701 Three Chopt Road, Henrico, VA 23229
GLEN ALLEN - 10700 Staples Mill Road, Glen Allen, VA 23060
GODWIN - 2101 Pump Road, Henrico, VA 23238
HENRICO - 302 Azalea Avenue, Henrico, VA 23227
HERMITAGE - 8301 Hungary Spring Road, Henrico, VA 23228
HIGHLAND SPRINGS - 15 S. Oak Avenue, Highland Springs, VA 23075
TUCKER - 2910 Parham Road, Henrico, VA 23294
VARINA - 7053 Messer Road, Henrico, VA 23231
VIRGINIA RANDOLPH 2204 Mountain Rd Glen Allen, VA 23060

SCOPE OF SERVICES

General Requirements:

The proposed solution shall provide:

A web-based platform that teaches computer science concepts and coding. The web based platform should scaffold learning, limit downloadable materials, and include a game or story element to engage students.

- Ozaria & CodeCombat are both web-based platforms that teach Computer Science concepts, coding concepts and coding syntax
- Ozaria & CodeCombat are scaffolded Computer Science curricula. Our curricula is scaffolded both with our "in-game" and "in-classroom" content
- Ozaria & CodeCombat have NO downloads within the curricula. No downloads are required to start or complete the curricula. Lesson plans, enrichment activities, and support/resource documents that are found in the teacher dashboard can be viewed on the web browser or downloaded
- Ozaria & CodeCombat are game based and have a story/theme

Teacher resources that include:

- Printable lesson plans
    - Yes, located in the Teacher Dashboard
    - Lesson plans are turn key for teachers
    - Lesson plans can be edited so teachers can customize their lessons
- Recommended pacing guide for teaching
    - Yes, located in the Teacher Dashboard
    - Teachers can adjust and customize
- Student activities or extension projects with instructor solutions
    - Yes, Both student activities and extension projects are found in the lesson slides located in the Teacher Dashboard.
    - Teachers will find warm up, connection, extension and exploration activities in the pre-created lesson plans
    - Students will create Capstone Projects within the games fo Ozaria & CodeCombat
    - Teachers can differentiate instruction using the resources listed above
- Auto-graded assignments
    - Ozaria & CodeCombat auto-check for comprehension and provide rubrics for teachers to assign their own grades. We feel teachers know their student and class objectives best; thus we provide them the tools to make independent decision on grading
- Student modules for learning that are locked/opened at teacher's discretion
    - Content within our curricula can be locked and unlocked by teachers
    - Teacher have full ability to lock and unlock content across and within classes in order to control pacing and differentiation
- A product that is aligned to computer science and/or Virginia CTE standards
    - Ozaria meets CSTA and ISTE standards as well as aligns to Virginia's CS 6-8 standards, enabling your teachers to teach with confidence as students master core Computer Science concepts, develop computational thinking skills, and learn about the relevance of Computer Science to their daily lives.
    - Alignment documents have been included for reference with RFP

- A product where the content is appropriate for diverse middle school students, grade 6-8 with separate, additional content available and appropriate for diverse high school students, grades 9-12
    - CodeCombat and Ozaria have been used by myriad of learners spanning all 3 grade bands, geographic regions, CS experience and various learning staples
    - CodeCombat's team works with districts to customize their curricula to meet the needs of the district, their educators and their students
    - CodeCombat and Ozaria can be used by students in both grade bands indicated in this section
    - Ozaria meets all middle school CSTA standards
    - CodeCombat can be used as a supplement to HS CTE curriculum to continue the learning journey from MS to HS
    - More detail about how CodeCombat's curricula supports diverse learners through it's educational components, engagement and Project Based nature: We have developed our instructional model using the 5E Model and is based on proven theories and extensive evidence around how students learn best. The 5E Model of Instruction includes five phases: Engage, Explore, Explain, Elaborate, and Evaluate. It provides a carefully planned sequence of instruction that places students at the center of learning. It encourages all students to explore, construct meaning, and relate new concepts to real-world contexts. Our Ozaria curriculum helps students have a deeper understanding of the concepts they are learning by providing them with opportunities to connect new knowledge to existing knowledge as well as to real world contexts. Ozaria immerses students in an adventure game in which their knowledge of Computer Science advances with the storyline. In this engaging learning environment, students build real-world skills through the power of play. The cinematics and cutscenes set the stage for the story and deliver instruction, going over key terms and concepts, to help reinforce the lessons delivered by the teacher. Ozaria has concepts checks to test students' knowledge and practice levels to apply what they've learned. At the end of each chapter, students apply their coding knowledge through the creation of their own unique projects.
- In addition to CodeCombat's full computer science curriculum, we also offer an esports platform and comprehensive professional development. Information listed below.
    - Professional Development Description
        - CodeCombat's Professional Development course has 40 hours of self directed, web-based video modules that provide educators with the knowledge, skills and resources to implement high-quality CS instruction. Each module follows the learn it, teach it, try it approach to learning specific concepts taught in Ozaria, general CS teaching topics and explorations, as well as general teaching strategies. Our PD is listed as one of CSTA's list of Quality PD Opportunities and qualifies for valuable professional education credit hours.
    - AI League (Esports) Description
        - Our esports program provides an opportunity for students to practice and apply their coding skills in a competitive environment. Many of the competitive arenas also provide a deeper dive into advanced concepts such as functions, conditionals, and lists/objects. Students practice problem solving strategies as they develop algorithms that can go head to head against other competitors in the tournament. This is great for an after school program or as enrichment.
- Technical support for all users, including real-time assistance if needed during class time.
    - CodeCombat has a designated customer support team that is available to answer questions and support educators via email or chat
    - HCPS will also be assigned a designated District Success Manager to help the

district with questions and problem-solving
    - There are full chapter and level specific solution guides in the Teacher Dashboard
    - There are myriad of "how to guides" and tutorials in the Teacher Dashboard for teachers to reference to support them with questions like 1) How do I make a class? 2) How do I create my class roster? 3) How do I assign content? Note, these resources are available 24/7
- A toll-free number for help desk support to HCPS at a minimum from 8 am to 5 pm EST, Monday-Friday
    - CodeCombat does not have a toll-free number to call
    - HCPS will have technical support (outlined in section f) and a District Success Manager (outlined in section h) for support
    - Dedicated account representative to manage licenses and to review the usage data with content specialist
    - HCPS will be assigned a designated District Success Manager. See more details on DSM within the company profile.
    - DSM can be reached via email or phone during normal business hours

The successful bidder shall provide teacher training - one-hour minimum training in a synchronous, virtual format to introduce teachers to the platform, inform how to find and use instructor materials, and answer questions.

- CodeCombat offers school-wide and district-wide implementation training that meets all of these requirements. See some key points below
    - 1 hour training
    - Virtual (on Zoom)
    - Overview of curricula, resources, brainstorming session for implementation and Q&A
- CodeCombat also offers a 40-hour fully credited Professional Development course that can be purchased for an additional cost. Our PD program is CSTA-endorsed and listed on their website under PD Opportunities.

Technical Specifications:

User Interface

- Browser Support - the proposed solution shall:
    - Have compatibility with the current versions of multiple browsers- at minimum, current versions of Edge, Safari, and Chrome browsers.
        - CodeCombat products run best on a modern browser such as Chrome, Safari, Firefox, or Edge.
    - Maintain compatibility with listed browsers and future versions/updates/releases of the listed browsers for the duration of the contract.
        - CodeCombat ensures that all programs are compatible with updates to the following browsers: Chrome, Safari, Firefox, or Edge.
    - Only require standard browser plugins.
        - CodeCombat products do not require plugins
- The proposed solution will be compliant with the Americans with Disabilities Act requirements for accessibility.
    - All CodeCombat products have been created with reasonable accommodations to support user with disabilities
    - Specifics have been outlined in the Web Accessibility portion of the iRFP
- The proposed solution shall be cloud-based and delivered via the Internet over wireless LANs to the client's browser.
    - CodeCombat's products are all accessed via web browsers, are cloud-based and can be delivered throughout HCPS' network
- The proposed solution shall provide an intuitive user interface that allows for ease of use by teachers and students.
    - CodeCombat and Ozaria…
        - Make getting started very user friendly by having prompts, how to guides and an intuitive workflow that has been battle-tested on over twenty million learners
        - Have dashboards for teachers and students. The teacher dashboard is easy to use and provides helpful data, enabling teachers to easily differentiate instruction when needed. Student dashboards allow students to quickly pick up where they left off so they never get off track.
        - Have built-in supports for students to reference within the platform to maximize independent work and peer coaching by students
        - Dashboards and game platforms have visual cues, systematic instructional components and categorized information for ease of use
        - We constantly hear that ease of use is one of the biggest things that educators and students enjoy about the curricula, platform and educational tools
- The proposed solution shall support mobile technology including but not limited to the specific mobile devices currently used in HCPS (iOS, Chromebooks, and Android Platforms)
    - CodeCombat and Ozaria…
        - Are text-based computer science curricula, so to maximize their potential, a student needs access to a keyboard.
        - Work best on laptops and Chromebooks
        - Will work with iPad and Tablets. To optimize use on these devices a student would need an attachable keyboard. However, we recommend using a laptop or Chromebook
        - A minimum of 200 Kbps bandwidth per student is required, although 1+ Mbps is recommended
        - CodeCombat runs best on computers with at least 4GB of RAM, on a modern browser such as Chrome, Safari, Firefox, or Edge. Chromebooks with 2GB of RAM may have minor graphics issues in later courses.

Integration:

- The proposed solution shall provide methods for user account administration that are easy to use and maintain.
    - CodeCombat & Ozaria…
        - Have an Admin dashboard and teacher dashboard that shows student/class data, stores capstone projects, houses resources and maintains the ability to maintain account administration at the district, school or classroom level
- The proposed solution shall support a single sign-on solution that does not require staff or students to have a separate account or password for accessing the vendor's application.
    - CodeCombat & Ozaria…
        - Are compatible with Google Classroom and Google's single sign on
        - Are integrated with Clever and Clever's SSO
- The proposed solution shall allow for LTI, Azure Active Directory or LDAP as a method of authentication and authorization.
    - CodeCombat allows for authentication and authorization using Clever
- The proposed solution shall provide a means to identify the individual or client using the application, authenticate the individual and determine the authorities and rights granted to that individual as well as a reporting engine for tracking usage and progress.
    - CodeCombat allows for authentication via Clever and Google for single sign-on. Separately, a user can be authenticated via their email or username and associated password. Usage and progress are tracked via the teacher dashboard. The teacher dashboard is easy to use and provides helpful data, enabling teachers to easily differentiate instruction when needed.
- Any requirements for student, staff, course, roster or school information must be supported through a common specification. The exchange of data must be through a common protocol and not require the installation of vendor-specific software in the HCPS internal infrastructure. HCPS currently supports the following means of exchanging student information in order of preference but will accept other non-vendor specific protocols:
  LTI integration as a Tool Provider (TP) with our LMS Solution (Schoology)
    - SIF - Student Information framework
    - Exchange of information through Clever - a third party vendor for exchanging common data for school systems; The Successful Offeror is responsible for any costs incurred with Clever implementation.
    - API integration with our SIS, PowerSchool
    - File exchange to a vendor-supported sFTP server
    - CodeCombat allows for authentication and authorization using Clever.
- No additional fees may be charged to HCPS for data integration
    - CodeCombat will not charge HCPS additional fees for data integration
- The proposed data exchange solution must be described in detail in the Offerer's response. The proposed solution must also include limitations the Offeror has such as the number of teachers for a class and the number of schools associated with teachers and students.
    - By using Google Classroom SSO and rostering, or teacher- or district-led Clever SSO and a sharable class code invite flow, CodeCombat puts easy, secure, privacy-conscious data sharing control and ease of setup in the hands of teachers and students. There are no limits on the number of teachers per school, schools per teacher, classes per teacher, students per class, teachers per student, classes per student, or any such configuration.
- Solutions that allow for seamless integration of their product through the IMS Global interoperability standards are preferred
    - CodeCombat supports seamless LTI interoperability and integration for SSO according to IMS Global standards through Clever or Google Classroom.

Infrastructure and System Administration:

Offerers shall provide:

- Details of the hosting environment including hosting provider, service level agreements between the offeror and the hosting provider, and length of the relationship between the offeror and the hosting provider.
    - We run exclusively on AWS, with our main cloud deployments in their Northern Virginia data center. We have been operating on AWS since 2013, operating under AWS's best-in-class standard SLAs (example: 99.99% uptime on EC2).
- Specifics of structures in place to ensure high availability including redundant Internet paths, hardware failover, scalability, and protection against denial of service attacks or other network threats.
    - We leverage AWS's industry-leading redundant network provisioning, with the capability to spin up new deployments in other available zones and regions in the case of any outages. All application servers and databases are deployed in fault-tolerant clusters of at least three machines, with hourly backups ensuring protection from data loss
    - We utilize CloudFlare for all of our externally facing endpoints to provide DDOS protection
- Specifics of security measures in place to ensure that district data is secure during both storage and transit.
    - We deploy industry best practices around encryption in transit and at rest, with attention to the principles of least privilege, defense in depth, confidentiality, integrity, and availability, among others. Security measures include taking advantage of AWS updates and security configuration recommendations, virtual private cloud firewalls, secrets rotation, and other tactics.
    - AWS manages OS-level patch updates on the individual machines within our server clusters to ensure up-to-date security patches are in place. Our dependencies are updated during at least biweekly deploys of our application code, which is packaged in Docker containers that include the latest security patches.
    - District data is stored inside managed MongoDB Atlas database clusters inside our AWS virtual private cloud, where it is encrypted at rest. Database server instances within these clusters are also kept updated by routine MongoDB security updates.
- SOC 2 compliance status (certification documentation should be provided)
    - Formal SOC 2 compliance certification is still pending; certification on HCPS's desired timeline available on request.
- Specifics of structures in place to ensure acceptable disaster recovery including backup schedules and redundancy.
    - Our database runs in a multi data center cluster and in the event of a database failure we immediately fail over to a secondary database that is synced with the original database. Additionally, we store encrypted backups of our customer data and in the event of data loss we can restore our databases from these backups. Backups taken every six hours are stored for one week; backups taken every week are stored for four weeks; backups taken every month are stored for one year.
- Internet Bandwidth requirements and provide a per-user bandwidth usage specification of the software product.
    - A minimum of 200 Kbps bandwidth per student is required, although 1+ Mbps is recommended.
- Specifics of the availability of remote access to the district's data outside of the web-based application.
    - CodeCombat's programs are web-based and we do not provide remote or offline access by default. We can provide Outcomes Reports per teacher in a PDF format
- Specifics on the frequency and duration of operating system and application updates including the procedures used to inform the district of maintenance windows and system downtime for these tasks.
    - CodeCombat programs are web-based and do not require any system or application updates or scheduled downtime.
- Any tools available to measure system responsiveness.
    - The district-facing application performance and status dashboard is not part of our typical district offering, but could be included for large deployments.

- Any limits on data storage (i.e. user quotas, access to previous year data, database size, etc.).
    - No
- The proposed solution shall be deployed on servers and equipment hosted or administered by the Successful Offeror. Hosting the solution on a 3rd party, such as Amazon or Azure, is acceptable.
    - The CodeCombat platform is hosted on AWS.
- The proposed solution will provide a secure, web-based system for data in transit and at rest.
    - User access to the CodeCombat platform is gated by secure, role-based accounts using the principle of least access. Account access is protected by either Google/Clever-based SSO or NIST-aligned best practices for passwords and information security. Traffic is served encrypted over HTTPS with TLS v1.2 or v1.3 depending on client capability. Data is encrypted at rest.
- Successful Offeror(s) will document compliance with all local, state, and federal laws related to student data privacy.
    - We comply with local, state, and federal laws as indicated in our privacy agreement: https://codecombat.com/privacy.
- The proposed solution shall contain neither commercial content nor serve as a vehicle to market goods and services
    - CodeCombat does not contain commercial content nor serve as a vehicle to market goods and services

Web Accessibility

The solution shall be accessible to persons with disabilities, including:

- Blindness, color blindness, visual impairment
    - CodeCombat's products work well with any accessibility feature on a Mac or PC product. Ex. zoom, magnification, invert colors, color contrast, etc.
    - CodeCombat's products work well with non computer-embedded tools such as the zoomtext software
    - Lesson plans in Ozaria & CodeCombat can be printed and manipulated to meet a student's needs. Examples are blown up text, adjusting color schemes, the ability for a student to use any handheld/desktop magnifying tool, and the ability to convert lesson plans to braille or adapt for student who are blind
    - Ozaria has voice over narration for Chapter 1. Adding voice over narration for Chapters 2-4 is on CodeCombat's company roadmap, but does not have a specific time. If desired, built-in text-to-speech can be enabled instead of using external screen readers.
- Deafness, hearing impairment
    - CodeCombat's products are text-based resources that are done on a computer (with the ability to print lesson plans and student-facing activities out). Students who are Deaf or hard of hearing can read and interact with the entire curricula in a text-based format
    - Parts of Ozaria & CodeCombat have voice over narration; however, there are "closed captioning" that appear as text on the screen for any voice over narration
    - There are a multitude of visual cues throughout CodeCombat's product that will assist all learners but are very accessible to students who are Deaf/hard of hearing. These visual cues pop up in the middle of the screen and are all text-based and can be easily read at a student's preferred pace
- Speech impairment
    - CodeCombat's products can be completed by students with speech impairments
- Mobility, strength, dexterity, or reach impairment
    - CodeCombat's products can be completed by students with impairments relating to mobility, strength, dexterity or reach. Extensive, beginner-focused autocomplete functionality minimizes the need for extensive typing of code.

The solution shall support the use of commonly available screen readers.

- The solution shall comply with Federal Web Accessibility Standards (part of Section 508 of the Rehabilitation Act).
    - CodeCombat's products meet all Section 508 requirements apart from 302.1 "Without Vision" support for in-game graphical displays of level maps in programming puzzle levels, where limited vision is required to understand the two-dimensional puzzle layout. Though one could invoke section E202.6 to determine that full support for game-based learning of coding would require undue burden or fundamental alteration, given that there are no viable alternatives in existence, and provide alternate means of pairing visually impaired students with sighted students to describe the visual layout of levels, we would strive to provide equal access to all students and are endeavoring to invent a novel screen-reader-based alternative for the in-game graphical display, should HCPS want to be part of the beta program for this enhanced accessibility feature.
- The solution shall meet Level A and Level AA guidelines as specified by the W3C's WCAG 2.0 guidelines.
    - CodeCombat's products meet both WCAG 2.0 Level A and Level AA guidelines, with one minor exception of keyboard focus trap during coding (WCAG section 2.1.2) due to how the tab key is used in coding and which requires a mouse/touch interface to

break focus; we anticipate adding a WCAG-compliant keyboard shortcut hint for this before the start of the fall 2021 semester.

- The proposed solution shall be able to handle at least 60,000+ concurrent HCPS users with less than 30 ms latency. Offeror(s) must provide comprehensive documentation to evidence the ability to accommodate concurrent users based on data collected from a similar environment
    - CodeCombat's cloud architecture model supports nearly unconstrained high performance scalability, having handled 2500 concurrent users per server instance (~600 requests per second at 9.7 ms p50 latency) over many server instances during annual Hour of Code traffic surge events. Should HCPS want to have 60,000 students coding on our platform concurrently, we can deploy 24+ cloud server instances with AWS and CloudFlare in the AWS Northern Virginia datacenter location, less than 150 miles from HCPS, for high performance. Smaller-scale deployments will be automatically handled by autoscaling Northern Virginia AWS instances on our current architecture.
- If the solution is reliant on LDAP authentication, HCPS will only accept a defined external IP address to allow Firewall transactions and will not accept the allowance of entire network segments.
    - CodeCombat does not rely on LDAP authentication.
- HCPS shall have the ability to submit requests for an alteration of the digital content (including additional supporting data, modification of current data, or removal of data deemed inappropriate by HCPS) via email or web-based forms embedded in the digital content.
    - CodeCombat is well-versed in a wide variety of data ownership and custodial protocols such at these, with requests submittable either to schools@codecombat.com or via on-site chat or email support widgets.
- Provide all documentation for each piece of software equipment, or software, including copyright information , all operator and user manual, training materials necessary for the proper and successful use of the software where an installation or configuration on HCPS network or devices are required.
    - No HCPS device installation or configuration is required apart from ensuring that basic web firewall rules continue to not block essential domains (which have already been tested to work in our preliminary HCPS pilots).

Computer, Software, and Network Specifications:

The proposed solution shall meet all performance requirements defined in this document and be currently compatible with the following minimum computer specifications as well as maintaining compatibility with updates/patches/versions of listed software for the duration of the contract (at a minimum beginning with the versions listed below)

Staff District-wide; All High, Middle Students and limited numbers for Elementary Students

Windows Laptop

- Software
    - OS - Windows 10, 1903 or higher: 64-bit
    - Browsers - Google Chrome 86.x or above; Microsoft Edge 89.x or above
    - Java - 1.8.0_251 or above
    - PDF Reader - embedded within Google Chrome and Microsoft Edge
    - Adobe Reader - standalone application
    - Adobe Shockwave- 12.2 or above
    - 0365 Pro Plus
        - These specifications exceed the minimum system requirements for CodeCombat and

Ozaria

- Hardware:
  - Latitude 3380s model - Specifications
    - Display - 13.3-inch HD Anti-Glare LED with integrating webcam and noise reducing array microphone
    - Hard drive - 128GB SSD
    - Processor - 2.50 GHz Intel® i5 -Dual Core
    - Memory - 8GB DDR3 SDRAM
    - Graphics Card - 128MB Dedicated VRAM; 1366X768 - Native Resolution
    - Network Connections: Built-in Wireless Card (802.11ac) and 10/100/1000 Gigabit Ethernet
  - Other
    - Stereo headphone/Microphone combo jack
      - These specifications exceed the minimum system requirements for CodeCombat and Ozaria
  - Latitude 5420 model - specifications
    - Display - 14" FHD (1920x1080) Non-Touch, Anti-Glare, IPS, 250nits, WLAN/WWAN, HD Camera
    - Hard drive - 128GB PCIe NVMe Class 35 SSD
    - Processor-11th Generation Intel® Core™ 13-1125G4 (4 Core, BM cache, base 2.0GHz, up to 3.7GHz)
    - Memory - 8GB DDR4 Non-ECC
    - Network connections - Intel® Wi-Fi 6 AX201 2x2 .11ax 160MHz + Bluetooth 5.1
    - Graphic cards - 13-1125G4 Trans , Intel UHD Graphics, Thunderbolt
      - These specifications exceed the minimum system requirements for CodeCombat and Ozaria
  - Latitude 33110 model - specification
    - Display- 13.3" HD (1366 x 768) Anti-Glare Non-Touch, Camera & Microphone, WLAN Capable
    - Hard drive - 128GB PCIe NVMe Class 35 SSD
    - Processor - 8th Generation Intel® Core™ i5-8265U Processor (4 Core, 6MB Cache,1.6GHz,15W)
    - Memory- 8GB DDR4 Non-ECC
    - Network Connections - Intel Dual Band Wireless Driver 9560 (802.11ac) 2x2 + Bluetooth 5.0; Intel® Dual Band Wireless AC 9560 (802.11ac) 2x2 + Bluetooth 5.0
    - Graphics card - Intel® Core™ i3-8145U Processor w/Intel® HD Graphics 620
      - These specifications exceed the minimum system requirements for CodeCombat and Ozaria
  - Latitude 3180 Education model - Elementary Carts - specifications
    - Display - 11-inch HD with integratedwebcam
    - Hard drive - 64GB eMMC Storage - Hard drive
    - Processor - Intel® Pentium® N4200
    - Memory - 4GB 1600MHz LPDDR3
    - Video Card - Intel integrated HD graphics 4600
    - Network Connections - Intel Dual Band Wireless-AC 7265 802.11ACWi-Fi + BT 4.0 LE Wireless Card (2x2)
      - These specifications exceed the minimum system requirements for CodeCombat and Ozaria
  - Other
    - 2 speakers
    - 1 Combo headphone/microphone jack

        - USB card reader
            - These specifications exceed the minimum system requirements for CodeCombat and Ozaria

Chromebooks (primary device for elementary students, Grades 1st-5th)

- Software
    - Chromium OS 86.x+ or above
        - These specifications exceed the minimum system requirements for CodeCombat and Ozaria
- Hardware
    - Dell Chromebook 3180 (touch & non-touch) - specifications
        - Hard drive - 16GB **eMMC**
        - iProcessor - Celeron N306
        - Memory -4GB
        - Video Card - Intel integrated HD graphics 4600
        - Network - Built-in Wireless Card (802.11a/g/n)
            - These specifications exceed the minimum system requirements for CodeCombat and Ozaria
    - Other
        - 2 speakers
        - Headphone/Microphone
        - Integrated webcam
            - These specifications exceed the minimum system requirements for CodeCombat and Ozaria
    - Dell Chromebook 3100 (touch & non touch)
        - Display - 11.6 " HD (1366 x 768) Anti-Glare non touch, camera & Microphone, WLAN Capable - Display
        - Hardrive 16GB eMMC
        - Processor - Intel Celeron N4020 (Dual Core, up to 2.8GHz, 4M Cache, 6W) 1 USB Type-C, 1 USB 3.1
        - Memory - 4GB 2400MHZLPDDR4Momm-ECG
            - These specifications exceed the minimum system requirements for CodeCombat and Ozaria

iOS Devices - Elementary (primary device for PreK-K) and Secondary

- Software
    - iOS version - 14.x
    - Safari browser
    - Hardware (Based on iPad MR7F2LL/A)
    - Specifications:
    - Display - 9.7-inch (diagonal) LED-backlit, multi-touch with IPS technology
    - Storage - 32GB
    - Wireless-A, Wireless-AC, Wireless-B, Wireless-G, Wireless-N
    - Bluetooth 4.2 Technology

- Camera, Photos, and Video Recording
  - These specifications exceed the minimum system requirements for CodeCombat and Ozaria

Networking Environment

- Location WAN Circuit Bandwidth
  - 1 Gbps or greater Comcast ENS Data WAN Circuit to High Schools.
  - 1 Gbps or greater Comcast ENS Data WAN Circuit to Middle Schools.
  - 500 Mbps or greater Comcast ENS Data WAN Circuit to Elementary Schools.
  - 100 Mbps or greater Comcast ENS Data WAN Circuit to remote Administrative sites.
- District Internet Bandwidth
  - (2) 8 Gbps Comcast ENI circuits to provide a total district bandwidth of 16 Gbps of Internet Service to the Data Center which is then distributed to the entire district via the size and type of WAN circuits listed above.
- Local Area Network and Wireless Infrastructure
  - All Schools/Sites utilize either 1 Gbps or 1O Gbps fiber backbone connections between their MDF & IDF's network closets.
  - All Schools/Sites utilize a combination of LightWeight or Cloud-Controlled wireless access points capable of supporting the IEEE 802.11 ac wireless standard and are connected at 1 Gbps, or greater, to Cisco Catalyst 9200 & 9300 series POE switches
- These specifications exceed the minimum system requirements for CodeCombat and Ozaria

PROPOSAL RESPONSE FORMAT

Executive Summary

Company Profile

Offerers are to present a Company profile that shows the ability, capacity and skill of the Offerer, their staff, and their employees to perform the services required within the specified time. Include the following information.

- Years in business outlining the company history and experience providing progress monitoring systems for K-12
- Experience with a project of this magnitude
- Experience in K-12 market
- Diagram of the Offerer's network topology as well as that of the Offerer's ISP if applicable.
- Number of employees proposed for the development and ongoing processes including training

Founded in 2013 and headquartered in San Francisco, CodeCombat Inc. is a technology company now employing a large team of learning designers, game developers, and school support specialists in 11 states and 6 countries, with thousands of paid school and district customers in all 50 states. CodeCombat's company mission is focused entirely on providing engaging and effective computer science instruction to K-12 students. CodeCombat is led by CEO and co-founder Nick Winter and his leadership team of passionate education advocates and technologists.

Over the last eight years, over twenty million people have learned to write Python and JavaScript using CodeCombat, making it one of the most popular coding games in history. Recently, the company has introduced Ozaria, its next-generation computer science platform and full solution for schools and districts' computer science education needs.

In Ozaria, each learner customizes their own hero and finds that only through mastering the lost magic of coding can they save the world of Ozaria from impending darkness. The unfolding narrative creates a powerful student-centered learning experience, with each student's investment in Ozaria's story paralleling the investment they are making in their own learning journey.

Throughout their learning journey, students build real world skills via a thoughtfully-designed content progression that includes game levels, instructional character dialogue, cutscenes, and more. They learn to type real code, problem-solve using computational thinking, demonstrate understanding through formative assessments, and apply what they learned by making their own projects. From games to choose-your-own-adventure stories, student creativity results in a portfolio of work that showcases their creative identity and helps spark a long-term passion for computer science.

In Ozaria, educators play a crucial role in facilitating student learning through curriculum resources and tools. Each unit throughout the curriculum has a lesson plan that outlines learning objectives, common student misconceptions, key terms, and CSTA standards. In addition, Ozaria has implementation guides, rubrics, and a comprehensive teacher dashboard that helps teachers to track student progress, check student code, and view data on level completion.

Districts looking to expand computer science look to CodeCombat's full suite of products and services, from the best-in-class Ozaria computer science curriculum, to the CodeCombat AP- Computer-Science-compatible course, to our CTE-aligned game development and web development courses, to our 40-hour CSTA-certified professional development course, to our K-12-ready coding esports platform, to our supplemental coding tutoring services and ELL support. That's why over 140,000 educators and 25,000 US schools trust CodeCombat for computer science curriculum solutions.

CodeCombat has deployed its products and services to school districts large and small across the country in every state, including several school districts in Virginia, serving customers from individual elementary school teachers, to district-wide school computer science pathways, to high-school AP Computer Science Principles and CTE courses. CodeCombat has provided best-in-class computer science education to learners from diverse socioeconomic, cultural, linguistic, and ability backgrounds, with built-in support for accessibility, differentiated instruction, remediation, and full localization in Spanish, Mandarin, and other languages. Across situations with aging Chromebooks or limited at-home computers, low-bandwidth internet connections, educators with no background in computer science, sudden shifts to distance learning or hybrid classrooms, new state computer science standards, and inconsistent student exposure to coding and computer science, CodeCombat has helped thousands of school districts put effective, comprehensive computer science curriculum plans into place.

McREL International, a leader in research-based guidance and evaluations of educational technology, conducted a research study on the effectiveness and engagement of CodeCombat in 170 classrooms across the country. They found that 99% of teachers reported that their students enjoy using CodeCombat to learn how to code, 95% would recommend CodeCombat to other computer science teachers, and 94% said that CodeCombat helps them support students' problem solving abilities.

For more information, see the included research report and four case studies:

1. McREL International - CodeCombat Implementation Study
2. Bobby Duke Middle School, CA - Successfully Teaching Coding at a Title I School
3. Preston High School, WV - Supporting Multiple CS Pathways in One Class
4. River Ridge High School, FL - Excelling on the AP Exam
5. Riverdale High School, FL - Teaching Computer Science Without Prior Experience

Supporting Henrico County Public Schools will be our general team of customer support representatives, software engineers, game developers, and business operations personnel, plus several key points of contact who will have greater involvement (see included resumes for more information):

Julie Molnar, Lead Curriculum Developer

With extensive experience both teaching in the classroom and developing curriculum at companies like Pearson and McGraw Hill across a wide range of subjects, age ranges, countries, and formats, Julie leads CodeCombat's education strategy and curriculum development initiatives. With an M.S. in Education from Northwestern University and an M.Ed from Loyala University, Julie has a passion for using instructional best practices and evidence-based design to instill life-long learning mindsets and behaviors, enabling all students to achieve personal and professional goals. Julie will be coordinating the overall

pathways design, curriculum implementation, professional development, and team staffing for HCPS.

Charlotte Cheng, Senior Curriculum Developer

Charlotte is a computer science education subject matter expert, seasoned curriculum developer, former classroom teacher, and children's book author. Having earned her Master's in Elementary Education from Stanford University, Charlotte has built cutting-edge K-12 curriculum for Disney, Wonder Workshop, Alt School, Stanford, LeapFrog, Gazillion Entertainment, and ALO7. Charlotte will work closely with Julie and other team members to create specific curriculum activities and alignments for HCPS.

Liz Coluni, Senior Inside Sales Manager

With 14 years of experience supporting school and district customers at companies like Wiley, Penguin, and Turnitin, Liz will lead the sales and school partnerships team for HCPS.

Taylor Sobha, Account Executive

Taylor has a degree in Special Education and has taught a variety of educational settings to a wide range of students. He has also developed curriculum to support adults with diagnoses and created/lead teacher training programs. Taylor will be HCPS's main point of contact for this partnership.

Adam LaSalle, District Support Representative

Adam was a classroom teacher for 9 years, served as a curriculum designer and department head, and holds a Masters in Education. Adam will work, or alongside Taylor, to ensure HCPS successfully implements all of CodeCombat's curricula and resources based on the needs of the district.

Nick Winter, CEO

We value HCPS's business and will provide all necessary resources to ensure a successful computer science program implementation, including direct involvement from CodeCombat's CEO and two-time successful edtech entrepreneur, Nick, on both the initial planning and design process as well as ongoing guidance and support throughout our service to the district.

JULIE MOLNAR

New York, NY
jmolnar6@icloud.com
914.217.7984
https://www.linkedin.com/in/julie-molnar-learner-success/

EDUCATIONAL TECHNOLOGY PROFESSIONAL

Ensure Learner Success

Proven, self-driven leader in development of online, blended content and assessments, utilizing instructional best-practices and evidence-based, outcomes-focused design. Passionate about instilling life-long learning mindsets and behaviors, enabling all students to achieve personal and professional goals. Build scalable quantitative and qualitative data collection, analysis, and reporting strategies. Develop and execute evaluation systems measuring impact of learner outcomes.

Expertise collaborating cross-functionally, gaining buy-in, and building strong relationships. Intrinsically motivated, demonstrating belief in improving lives of learners. Take strategic approach to problem solving, creating tools to help end users help themselves

Digital Authoring Tools | Learning Management Systems | Instructional Technology & Apps
Instructional Design Process (ADDIE, SAM) | Exploratory & Confirmatory Research | Impact Evaluation

PROFESSIONAL EXPERIENCE

CODECOMBAT, Remote **2020- present**

Lead Curriculum Developer

Responsible for overall education strategy for Ed Tech company. Serve as thought leader on topics from evidence-based best practices in online teaching and learning, outcomes-focused curriculum design, performance assessment, and professional development.

- Design and implement company curriculum and assessment strategy
- Manage team of Instructional Designers
- Create curriculum OKRs (Objectives and Key Results)
- Monitor and report on market trends and initiatives and align strategy based on results
- Create Professional Development training materials for all courseware
- Develop and deliver webinars on a number of topics, including game- and project-based learning, Inclusivity in the digital classroom, formative and summative assessment strategies, and remote and hybrid learning best practices.

PEARSON EDUCATION, Hoboken, NJ and London, UK **2012 - 2019**

Director of Outcomes & Impact, English & Global Schools 2016 - Present

Lead implementation of digital and blended instructional design best practices, including application of standards, scales and frameworks. Employ sound principles of formative and summative assessment, and learner and teacher journeys, aligning to customer needs. Spearhead design, execution, and reporting of exploratory and confirmatory impact evaluation studies for global products ensuring consistent delivery and improvement of outcomes for learners.

- Ensured all products delivered intended outcomes by implementing data strategies, evidence-based teaching and learning best practices, creating tools for definition and measurement.
- Transformed data-driven decision-making into "business as usual" by turning complex data into understandable, user-friendly visualizations

Senior Instructional Designer, In-course Assessments, English & Global Schools 2014 - 2016

Designed best- in-class assessments exceeding market needs, supporting learner outcomes, effectively measured progress and performance, and fully aligned to curriculum standards and expectations.

- Enabled learners to make measurable progress by creating new in-course assessment strategy for online platform, embodying formative and summative assessment best-practices.

Product Manager, MyLab LMS (Learning Management System) 2013 - 2014

Implemented agile methodologies in production of K-16 online products. Created UX design methodologies producing pedagogically sound, engaging digital apps and courseware.

- Created personalized learning opportunities in digital products and apps, using adaptive technology, automated feedback and remediation, progress monitoring and reporting.
- Reduced number of freelancers needed from 4 to 2, cutting production time by 1/3, implementing SAM instructional design model.

Editorial Manager, ELT 2012 - 2013

Designed pedagogical framework, creating briefs, scope and sequence documents, prototype, and content for K-6 print and digital programs and ExamView digital suite, implementing gamification and AFL principles.

MCGRAW-HILL EDUCATION, Columbus, OH **2010 - 2012**

Executive Editor, Career & Technical Ed

Led development and production of 3 new digital courses, fully aligning to standards and customer needs.

- Cut production time by 2/3 and reduced plant expenses by 15%, using agile development practices.
- Initiated and maintained relationships with state and local workforce boards to ensure alignment and cross-collaboration

ADDITIONAL RELEVANT EXPERIENCE

LITERACY CHICAGO, Head Instructor
Taught ESL (English as a Second Language) and ABE (Adult Basic Education) classes part-time.

CHICAGO ACADEMY FOR THE ARTS, Teacher
Took role of French teacher for grades 9-12.

EDUCATION

- **Master of Education (M.Ed)**, Loyola University, Chicago, IL
- **Master of Science, Education (M.S.)**, Northwestern University, Evanston, IL
- **Bachelor of Arts (B.A.)**, World Languages, Union College, Schenectady, NY

PROFESSIONAL DEVELOPMENT

- Global Product Difference Maker Award Winner, Pearson, 2018
- Futures Leadership Program, Pearson, 2017 - 2018
- Technical Advisory Board Member for Pearson Global Scale of English
- Mobile Pedagogy Team Member

CERTIFICATIONS

- Project Management, Chicago, IL -2012
- Six Sigma Black Belt, Columbus, OH -2011

CHARLOTTE CHENG

1116 S. Delaware St, San Mateo, CA 94404 • cycheng@gmail.com • (858)344-9641

EDUCATION

Stanford University, Masters in Elementary Education (2006), Bachelors in Symbolic Systems/Cognitive Science (2004)

Courses included: Computer Science, Human Computer Interaction , Linguistics (parsing analysis), Psychology (learning and child development), Project-Based and Inquiry-Based Learning for Math/Science/Language Arts

CURRICULUM/DESIGN EXPERIENCE

CodeCombat, *Senior Curriculum Developer*, 2020-Present, San Francisco, CA

- Designs the scope and sequence, assessment tools, and learning content for Ozaria. Ozaria is an adventure-based video game where students use the power of code to save the world.
- Leads the development of Ozaria's standards-aligned curriculum, which includes 40 lessons, turnkey slides for teachers, extension activities, and real-world connections.

Wonder Workshop, 2016-2020, San Mateo, CA

Curriculum Specialist *(2019 – 2020)*

- Provided consultation to leadership and management on all company decisions related to curriculum.
- Developed and executes roadmaps for all curriculum content and products. Past products have collectively earned over $2 million in sales.
- Designed and managed the development of all curriculum content across multiple product lines and mediums including in-app games, online courses, curriculum guides, and challenge cards.
- Coordinated deliverables and communicated with multiple teams including UI/UX, software/hardware engineering, graphic design, illustration, and content design.
- Developed and implemented professional development course content using Articulate and Litmos platforms.

Content Manager (2018-2019)

- Managed the full life cycle of curriculum products including user research, product requirement specifications, roadmaps, iteration, user testing, sprint planning, pilot programs, and revision/reprint work.

- Managed a team of writers and editors to continually develop cross-curricular lessons and activities that are published online and in print for educators who use Dash, Dot, and Cue robots.

Curriculum Designer (2016-2017)

- Designed and led the development of K-8 coding curriculum for the programmable Dash, Dot, and Cue robots. Included the creation of standards-aligned scope and sequences, curriculum guides, lesson plans, interactive web and in-app content, student-facing challenge cards, and student-facing notebooks. Examples of work can be seen here: www.makewonder.com/classroom/curriculum/

ALO7, ***Curriculum Writer***, 2015-2016, China

- Designed, wrote, and edited English learning curriculum for workbooks, craft books, and the Smart Board.
- The curriculum activities and lesson plans are used for diverse classrooms throughout China.

Walt Disney Company, ***Educational Consultant/Designer/Writer***, 2009-2015, Burbank, CA

- Researched and provided information on educational trends to various design teams and leaders in Walt Disney Imagineering and Disney Research & Development.
- Designed, wrote, and edited English learning curriculum for Disney English, a program that's located in multiple cities in China. The curriculum incorporated quest-based learning, Smart Board activities, music, and interactive projects.

Alt School, ***Educational Consultant***, 2015, San Francisco, CA

- Designed personalized language learning activities and lesson plans for the school's iPad-based learning system
- Created a database of online learning resources to target specific STEM education standards that included algebra and space exploration.

Gazillion Entertainment, *Learning Designer*, 2006-2008, San Mateo, CA

- Researched, designed and developed quest-based learning activities to teach concepts such as multiplication, fractions, chemistry, and algebra through a new computer game platform.
- Moderated student test groups to gain feedback on learning activities.

Stanford School of Education, *Technology Advisor*, 2006-2007, Stanford, CA

- Provided guidance and feedback on how to incorporate technology tools into the Stanford Teacher Education Program at Stanford University.

LeapFrog, *Associate Producer*, 2002-2005, Emeryville, CA

- Researched, designed, and developed interactive books to teach curriculum such as geometry, probability, and the alphabet through the LeapFrog LeapPad platform.
- Moderated student and teacher test groups to gain feedback and recommendations for interactive books.

TEACHING EXPERIENCE

College Park Elementary, *Resource Specialist/Intervention Aid*, 1st-5th Grade, 2013-2015, San Mateo, CA

- Designed and taught multimedia curriculum to English-Language Learners, which enforced writing, reading, and speaking skills using inquiry-based and project-based strategies.
- Worked closely with the school's Technical Consultant to incorporate computer programs and iPad activities into personalized learning experiences for students.

Tutorpedia, *Instructor*, 5th-7th Grade, Sacred Heart Preparatory, 2011-2012, Atherton, CA

- Designed and taught multimedia art workshops that integrated concepts of art, creative writing, design thinking, social studies and human anatomy into project-based and student-centered lesson plans.
- Worked collaboratively with Save the Children to develop an illustration workshop that was featured on CBS News.

Co-Teacher, *3rd-5th Grade*, John Gill Elementary, 2006, Redwood City, CA

- Designed and implemented interactive math and multi-grade science lessons.
- Created and taught integrated thematic instruction about rocks, minerals, and aquatic habitats.
- Practiced SDAIE skills and complex instruction methods for a diverse group that included English Learners and students with learning disabilities.

DESIGN EXPERIENCE

www.charlotteillustrations.com

- Expert knowledge in Adobe Photoshop/InDesign/Illustrator, KeyNote, Microsoft Publisher/PowerPoint/Word/Excel

- Working knowledge in multiple project management systems including JIRA, Confluence, and Trello.
- **Picture Book Illustrator**:
  - A Moment in Time (2012, received multiple awards)
  - Silly McGilly (2014)
- **Children's Book Author**:
  - Explore China: A Mulan Discovery Book
  - BoBo Loves Dumplings: A Dual Language Counting Book
- **Additional Clients:**
  - Stanford School of Education, Save the Children, Fly on the Wall Productions, Chiu Research Labs

LANGUAGES

Mandarin – Working Knowledge, Spanish – Working Knowledge

Elizabeth Coluni

Professional Experience

CodeCombat Inc.

Senior Inside Sales Manager *(December 2020 – Present)* San Francisco, CA

- Leading and directing a sales team of eight reps from sales development to customer success
- Establish OKRs, sales territories, target accounts, renewal book of business, comp plans and monthly forecasts
- Collaborate closely with other department leaders on projects to drive process and product improvements as well as increase effectiveness of sales automation

Inside Sales Manager *(November 2019 – December 2020)* San Francisco, CA

- Coached, motivated and developed a sales team of five AEs and two SDRs
- Guided the team to effectively prospect, qualify leads, manage pipelines, and close business
- Responsible for building the sales onboarding process as well as hiring and training new sales reps

Senior Account Executive *(November 2016 – November 2019)* San Francisco, CA

- Managed the entire sales process from prospecting to contract negotiation
- Created and executed on a strategic territory plan to prospect effectively with lead generating activities
- Connected with key decision makers, performed needs assessment, and presented solutions
- Managed pipeline and sales data in CRM to ensure accurate forecasting
- Top sales rep: 2017, 2018

Turnitin, LLC

Account Representative – Secondary Education *(January 2015 – November 2016)* Oakland, CA

- Drove new business growth through actively prospecting, developing and closing opportunities
- Maintained relationships with current customers, ensure their success, and grow accounts
- New business and renewal quota attainment: 110%, 100% (2015-2016)
- 2015 President's Club Bronze Circle Award

John Wiley & Sons, Inc.

Senior Digital Solutions Specialist – Higher Education *(January 2012 –Dec 2014)* San Francisco, CA

- Managed the sales, implementation, and retention of WileyPLUS, an online application for teaching and learning
- Quota attainment: 109% of 5M, 116.6% of 6.6M (FY13-FY14)
- 2014 Spot Bonus Award

Wiley Online Library Account Manager – Research *(June 2010 – Jan 2012)* Hoboken, NJ

- Sold licensed subscriptions of Wiley-Blackwell online publications to university and corporate librarians
- Renewal quota attainment: 113.5% of 2M, 104% of 5M (FY11-FY12)
- 2011 Excellence in Institutional Sales award

Institutional Sales Coordinator –Research *(October 2009 – May 2010)* Hoboken, NJ

- Supported a team of 16 Account Managers
- Renewed 25 accounts worth 500k

Penguin Group (USA) Inc.

Sales Assistant *(October 2007 – October 2009)* New York, NY

- Supported the SVP / Director of Sales and the National Accounts Manager
- Project managed the seasonal backlist titles

Education

University of Maryland – Robert H. Smith School of Business College Park, MD
Bachelor of Science: Dual Major in Marketing and Logistics, Transportation & Supply Chain Management

Skills

Skills: Salesforce, Solution Selling, Coaching, Change Management

TAYLOR SOBHA

(919) 504-6573
taylor@codecombat.com

CAREER SUMMARY: Experienced project manager with a passion for building businesses/educational systems and concurrently improving the lives of others. Six years' experience with crafting projects from the ground-up, bringing profit and longevity to organizations, positively impacting the surrounding community, and developing staff to do the same. Most recently named the Center Director of the Year at the second-most profitable Black Belt Coding Centers in the United States.

WORK EXPERIENCE:

CodeCombat - *San Francisco, CA*
Account Executive

- Support districts and educators to to build and enhance their Computer Science programs
- Meet with districts and educators to create customized implementation plans and brainstorm how they can create/enhance CS in their district/school
- Develop sales strategies to increase exposure to CodeCombat's curricula and resources
- Be a part of development groups for CodeCombat curricula, teacher supports and new initiatives like Professional Development and Esports

Code Ninjas – Morrisville, NC
Center Director February 2018-March 2020

- Develop and implement strategies to establish Center and bring it to be second most profitable Center among international franchises; design and execute programs to enhance client recruitment, client retention and client conversion; analyze operational costs and design plan to reduce overhead expenses; cultivate course curricula for center programs; create and maintain standard operating procedures for staff and members; act as community liaison between center and schools, businesses, and community organizations; securing cooperation and maintaining relationships with community leaders and business owners as part of outreach events; hiring, training, and oversight of center staff; development of training materials and manuals; management of operations of events at Center and off-site; oversight of operational costs; management of Center emails, promotions, social media, phone line, and marketing materials; provide technical assistance to Center instructors; fostering an environment of teamwork and leadership among Center staff

Marc Gold & Associates - Remote June 2017-January 2019
Job Development Mentor

- Mentored & coached students pursuing a national certification to become Job Developers through MG&A

SEEC: Seeking Equality, Empowerment, and Community for Adults with Developmental Disabilities – Silver Spring, MD
Project Manager February 2015-June 2017

- Led development, implementation, and data collection for the organization's pilot project based on national best practices; trained staff in community settings to use instructional strategies and systematic approaches at employment and recreation sites; established and maintained relationships with community partners (community colleges, local businesses,

government agencies); trained and managed direct support professionals; wrote sections of grants; organized and implemented program evaluation of pilot program and established community of practice

Instructional Consultant October 2013-February 2015

- Within the Workforce Development division, created, developed, and taught employment courses using Systematic and Direct Instruction that functionally related to peoples' work interests, contributions, conditions for success, and themes. Courses were offered to staff and students.

EDUCATION:

University of North Carolina Wilmington - Wilmington, NC
Major: Special Education K-12 (B.A) August 2009-May 2013
Concentration: Adapted Curriculum
Overall GPA: 3.7 Major GPA: 3.8

International Field Experience, Es La Bonita and San Pedro High School San Pedro, Belize
Student Teacher: April–May 2013

- Delivered in class, and pull-out, instruction a wide variety of students with special needs
- Taught rudimentary sign language
- Trained teachers at myriad of schools in Systematic Instruction, Direct instruction, and Discrete Trial Training

CERTIFICATIONS:

Certified in *Behavioral Principals and Strategies* (BPS)
Behavioral trainings for People with Special Needs

- Applied Behavior Analysis (ABA) Training
- TEACCH Training
- Discrete Trial Training

ADAM LASALLE

Chicago, IL 60660 | 845.774.9557 | adam.a.lasalle@gmail.com

WORK EXPERIENCE

CodeCombat

School Success Manager — *March 2021 – Present*

- Track record of strategically building relationships with teachers and school leaders that use CodeCombat
- Passionate about making the customer experience delightful, from the first inquiry to the sale, and from implementation and support to renewal
- Plans, develops, and hosts professional development and educator network-wide events to strengthen and grow CodeCombat network and mass market teachers
- Maintains and documents relationships and strong support systems through regular engagement and communication (meetings, phone calls, email, texts, ZenDesk, and Salesforce) with educators, school leaders, and all program staff

Chicago High School for the Arts

Learning Specialist (PD), Curriculum Designer, and Music Teacher — *September 2016 – March 2021*

- Creates, coordinates, and facilitates on-site and remote professional learning for teachers, school leaders, and staff members
- Collaborates with Department Chair to support school-wide growth, analyzing feedback on professional learning sessions and school-wide academic and behavioral trends and making the necessary changes for improvement
- Analyze department-wide and school-wide data to determine implementation status of new curriculum and technology, always remaining connected to student and school-wide needs

Influence Digital Solutions

Digital Marketing Associate & Copywriter — *February 2020 – March 2021*

- Coordinate and work collaboratively with the CEO to create engaging and informative campaigns on various platforms (Facebook, Instagram, Twitter, LinkedIn, etc.) for 16 companies
- Write blogs (50+) for 8 different company partners focusing on a variety of topics ranging from creative empowerment to how to build a more mindful workforce

Butler College Preparatory High School

Founding Teacher, Art Department Chair, & Head of Fundraising and Outreach — *July 2014 – August 2016*

- Initiated, cultivated, and managed the relationships with 10+ nonprofits and community artists as a way to expose students to different facets of the creative arts and encourage community within our school district
- Organized and coordinated professional development sessions on new educational technology and school- or district-wide best practices
- Played a pivotal role in developing the Arts Department staff, growing the number of teachers from 1 to 7

EDUCATION

Christian Brothers University
Memphis, TN — Masters of Education

State University of New York at Geneseo
Geneseo, NY — BA in Music

SKILLS

Salesforce, Intercom, Google Suite & Microsoft Office Suite (Excel, Word, PowerPoint), Slack, Social Media (Facebook, Instagram, Twitter, LinkedIn), MailChimp, Canva, iMovie, Project Management, Strategic Planning, Outreach

Nick Winter

San Francisco, California, United States

nick@codecombat.com

linkedin.com/in/nwinter

Summary

Everyone should have an opportunity to learn to code. As co-founder and CEO of CodeCombat, I'm bringing computer science to every kid in the world. Having developed the #1 app for learning to write Chinese characters, I had the insight that learning programming should be more like learning a language: students learn ten times faster when having a conversation with the computer than when listening to a lecture. Through the magic of game-based learning, all students can have that conversation, no matter their background.

In my spare time, I learn from my five- and two-year-old sons, develop open-source software, and have written a book about motivation hacking.

Experience

CEO, Co-Founder

CodeCombat

Feb 2013 - Present (8 years 5 months +)

Programming is magic. It's the ability to create things from pure imagination. We founded CodeCombat to give learners the feeling of wizardly power at their fingertips by using typed code and real programming languages.

As it turns out, that enables them to learn faster too. Way faster. It's like having a conversation instead of reading a manual. We want to bring that conversation to every school and to every student, because everyone should have the chance to learn computer science.

As an open-source project with hundreds of contributors from around the world, in the past few years, CodeCombat has rapidly grown into a movement in computer science education. From the first line of code to the thousands of schools and millions of students reached, I've had the opportunity to oversee both the game and the business.

Board Member

Inkren, Inc. (DBA Skritter)

2013 - Present (8 years 6 months +)

My cofounders and I grew Skritter to the #1 app for learning Chinese and Japanese characters. We then handed it off to the current team, under whose expert guidance it continues to grow while we use the lessons we learned teaching Chinese to teach the language of computer science (see CodeCombat).

CTO, Co-Founder

Inkren, Inc. (DBA Skritter)

May 2008 - 2013 (5 years 8 months)

Chinese is viewed as one of the most difficult languages to learn, and most of the difficulty comes from having to learn thousands of complicated characters (汉字) and the corresponding vocabulary words in a rich language with almost no common ground with English. And on top of the characters, there's the tones!

But what if you could remember 95% of all the characters, words, and tones you ever learned? And what if you could permanently learn a new piece of Chinese every 54 seconds? Then anyone could learn this beautiful language. With Skritter, I developed a Chinese-specific spaced-repetition learning algorithm and a stroke-level handwriting recognition system to make Chinese as easy as Spanish.

Education

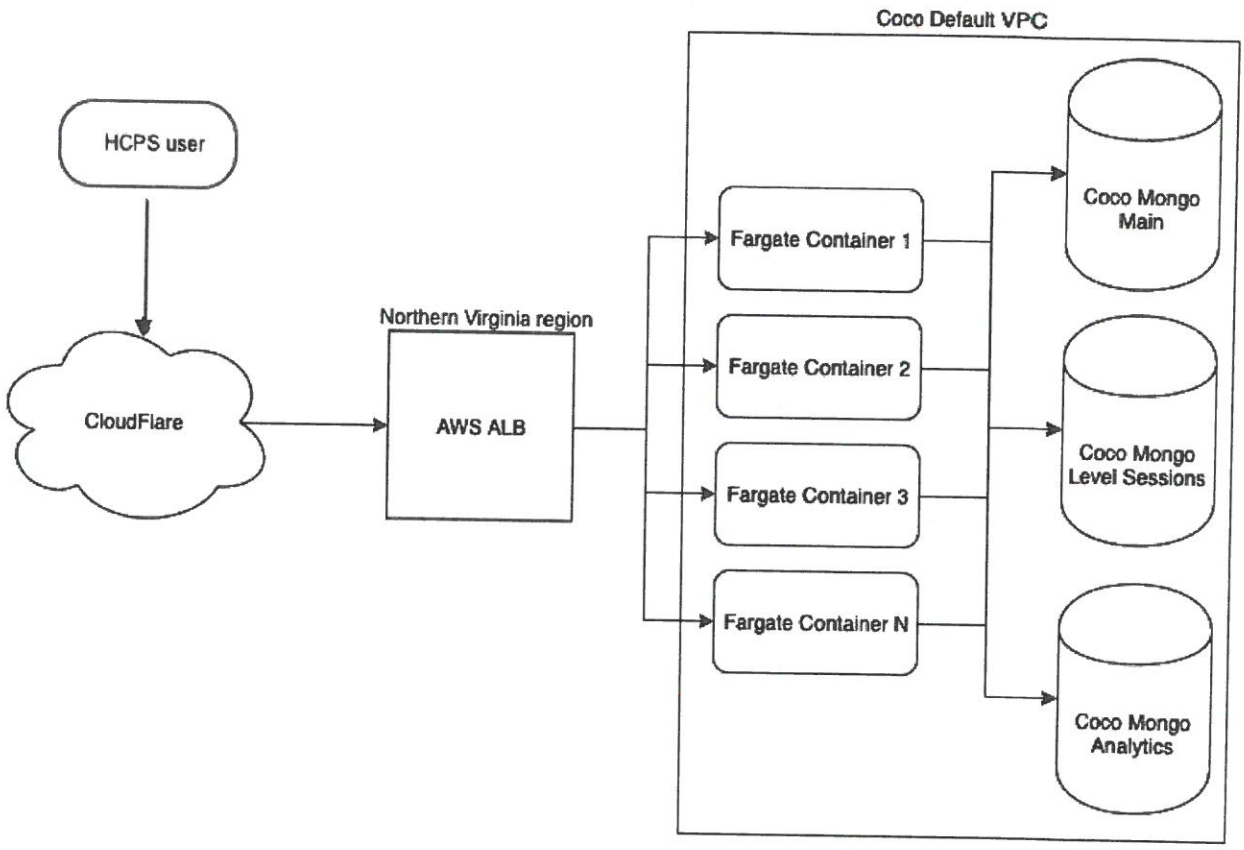
Y Combinator
2014 - 2014

Oberlin College
Bachelor's Degree, Computer Science, Mathematics, and East Asian Studies (Chinese)
2004 - 2008
I triple-majored while taking the equivalent of 5 years' of classes in 4 years and cofounding Oberlin Street Art and my first startup, Skritter, the handwriting recognition algorithms for which earned me highest honors in computer science (in which I had an effective 4.19 GPA) despite never having coded before college. My experience learning programming from scratch as an undergraduate gave me a passion for transforming the way we teach computer science and for expanding opportunities for all students to get exposure to coding at an early age.

Skills

Educational Leadership • Computer Science • Game-based Learning • Game Design • Writing • Entrepreneurship • Python • Chinese • Web Development • Open Source

Diagram of the Offerer's network topology as well as that of the Offerer's ISP if applicable.



References

References - Provide a minimum of three (3) references who could attest to the Offerer's past performance to provide services similar to those required for the contract. The list should include contact persons and telephone numbers. Offerers may not use Henrico County as one of their references.

- Virginia Beach City Schools, VA
  - Theresa Dougherty, Business and Information Technology Coordinator
  - (757) 648-6214
  - theresa.dougherty@vbschools.com
- Aberdeen School District, MS
  - Jeffrey Clay, Superintendent
  - (662)369.4682
  - jclay@asdms.us
- Lakota Local Schools, OH
  - Andrew Wheatley, CTE Director
  - (513) 668-4663
  - andrew.wheatley@lakotaonline.com

Subconsultants

(If Applicable) Information on any sub-consultants that is necessary to provide the services

CC-2

required. Provide name, experience, address, telephone number and qualifications.

- Not applicable.

Limitations

The proposed solution must be described in detail in the Offerer's response. Offerers must also include limitations the Offerer has, such as the number of teachers for a class and the number of schools associated with teachers and students.

- Solution described in detail under the General Requirements within the Scope of Service section of this iRFP.
- Limitations include:
    - We do not provide auto-grading. Ozaria & CodeCombat auto-check for comprehension and provide rubrics for teachers to assign their own grades. We feel teachers know their student and class objectives best; thus we provide them the tools to make independent decision on grading
    - We do not provide live chat to students

Evidence

Offeror(s) must provide comprehensive documentation to evidence the ability to accommodate concurrent users based on data collected from a similar environment.

- CodeCombat's cloud architecture model supports nearly unconstrained high performance scalability, having handled 2500 concurrent users per server instance (~600 requests per second at 9.7 ms p50 latency) over many server instances during annual Hour of Code traffic surge events. Should HCPS want to have 60,000 students coding on our platform concurrently, we can deploy 24+ cloud server instances with AWS and CloudFlare in the AWS Northern Virginia datacenter location, less than 150 miles from HCPS, for high performance. Smaller-scale deployments will be automatically handled by autoscaling Northern Virginia AWS instances on our current architecture.

Current Workload

Discuss the Offerer's current workload and the ability to provide the operational products by August 1, 2021.

- CodeCombat is fully prepared to deliver the curriculum needs found in the General Requirements subsection under the Scope of Service section, outside of the limitations indicated in this proposal, by August 1st, 2021.

Samples and descriptions of Reports

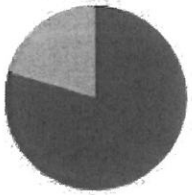
Provide samples and descriptions of reports offered and the ability to customize content and reports.

- Customized content
    - Lesson plans can be edited and customized by teacher, school and/or district
    - Student soapstone projects can be customized and created multiple times while still having students create unique games each time
- Customized Reports

    - Teachers access their dashboard which has a unique class roster that helps teachers understand student comprehension, progress and see specific code
    - CodeCombat team members can send schools customized outcomes reports
- Sample Outcomes Reports are attached

Course Progress

Chapter 1: Sky Mountain



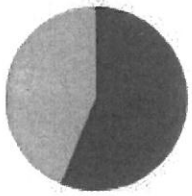
79% complete

103 students

Key Concepts:

- Problem Solving
- Sequences & Algorithms
- For Loops
- Debugging
- Syntax
- Objects
- Methods

Chapter 2: The Moon Dancers



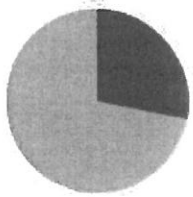
56% complete

100 students

Key Concepts:

- Game Design
- Variables
- Boolean Logic
- Conditionals

Chapter 3: The Phoenix Lands



28% complete

2 students

Key Concepts:

- Data Types
- Iteration
- Nesting
- While Loops

Summary

Using CodeCombat's personalized learning engine, your students wrote

6,650 computer programs

across an estimated...

44,285 lines of code

and expressed creativity by building

91 standalone game and web projects

Sandbox

Offerors shall provide a "sandbox" environment for any proposed solution for the committee to use for evaluation. If the "sandbox" environment is not available, offerors shall provide screenshots of the product with their proposal.

Ozaria teacher login

Email: hcsd@henrico.k12.va.us

Password: hcsd@henrico.k12.va.us

Ozaria student login

Username: hcsdstudent

Email: hcsdstudent@henrico.k12.va.us

Password: hcsdstudent@henrico.k12.va.us

Account maintenance and provisioning

Offerors shall provide a detailed explanation of how accounts are maintained in their system and how they support automated provisioning of users and accounts.

- Relevant information is outlined in the Infrastructure and Systems Adminstration portion of this iRFP
- Also reference CodeCombat's privacy page which is inked in this iRFP
- By using Google Classroom SSO and rostering, or teacher- or district-led Clever SSO and a sharable class code invite flow, CodeCombat puts easy, secure, privacy-conscious data sharing control and ease of setup in the hands of teachers and students. There are no limits on the number of teachers per school, schools per teacher, classes per teacher, students per class, teachers per student, classes per student, or any such configuration.
- To illustrate how account creation works on the user side see link to CodeCombat's Getting Started Guide: https://codecombat.com/teachers/resources/getting-started

Data Exchange Process

Offerors shall describe in detail the proposed solutions data exchange process.

- Relevant information is outlined in the technical sections of this iRFP
- By using Google Classroom SSO and rostering, or teacher- or district-led Clever SSO and a sharable class code invite flow, CodeCombat puts easy, secure, privacy-conscious data sharing control and ease of setup in the hands of teachers and students. There are no limits on the number of teachers per school, schools per teacher, classes per teacher, students per class, teachers per student, classes per student, or any such configuration.

Bandwidth Requirements

Offerors shall provide the per user bandwidth requirements for their proposed solution. Provide the average bandwidth per student required for the proposed solution.

- A minimum of 200 Kbps bandwidth per student is required, although 1+ Mbps is recommended.

Agreements required

Offerors shall submit any agreements to which HCPS may be requested to agree to as part of a final award.

- Include any terms and conditions the "end user" is required to accept.
    - CodeCombat does not require a EULA.
- Discuss how your firm handles parental consent, if required.
    - Please reference our privacy and legal pages:
        - Privacy Policy: https://codecombat.com/privacy
        - Legal: https://codecombat.com/legal

Timeline

Offerors shall provide a detailed timeline for implementation of the project indicating resources (responsible party) and completion dates.

- Completion of Henrico iRFP by June 30th - CodeCombat
- Award of iRFP by August 1st - Henrico
- Purchase of licenses and training by August 30th - Henrico
- Implementation Training by September 1st - CodeCombat
- Distribution of licenses to district by September 2nd (dependent on purchase being completed) - CodeCombat

Pricing

Complete the scenario provided in Attachment C. Also provide detailed pricing for all costs associated with providing the services outlined in Section 11. Scope of Services. List all categories separately, itemized for evaluation, such as subscription costs, training of County staff, Professional Development at a minimum. Provide details if tiered pricing is available. **Attachment C.**

- CodeCombat provided all the necessary information in section C - Pricing Options

Financial Stability

Offers shall provide evidence of financial stability.

- CodeCombat has been in business serving educators and learners in the US since 2013, has seen significant revenue growth every year, is backed by top investors, and anticipates reaching cashflow positivity in Q3 2021.

Contract Documents

Provide copies of any contract documents, Saas Service Level Agreement (SLA), etc. that would be needed to be signed by the County if awarded the contract including any service or business agreements.

- Not applicable

Assumptions

List any assumptions made when responding to the Scope of Services requirements.

- CodeCombat does not have any assumptions to highlight here

Exceptions

List any exceptions to the Scope of Services and General Terms and Conditions in a separate section of the Offeror's proposal response and mark the section as "Exceptions ", except for exceptions to liability provisions contained in the Request for Proposal.

- CodeCombat does not have any exceptions to highlight here

Appendices

Optional for Offerors who wish to submit additional material that will clarify their response.

- Attached Documents
    - Ozaria Scope & Sequence
    - CodeCombat Scope & Sequence
    - Ozaria Flyer
    - CodeCombat Flyer
    - Ozaria Pacing Guide
    - District Flyer
    - Esports Flyer
    - Ozaria Professional Development Flyer
    - Ozaria Professional Development Table of Contents
    - Ozaria ISTE Standards Alignment
    - Ozaria CSTA Standards Alignment
    - Resumes
        - Julie Molnar
        - Charlotte Cheng
        - Liz Coluni
        - Taylor Sobha
        - Adam LaSalle
        - Nick Winter
    - CodeCombat Research (information in Company Profile)
    - Teacher Outcomes Reports

PRICING OPTIONS - Attachment C

Provide pricing for the scenario below based off pricing

being offered:

*NOTE: A pricing document has been attached with the iRFP for clarification on pricing for all resources that CodeCombat offers and would be possible for HCPS to purchase.

Scenario	**Price**
Provide pricing for an annual subscription for one site licenses for a high school for 149 Business students	$5,215
Virtual training for 25 teachers (minimum one hour)	$1,000 per 1 hour session

Provide pricing as it relates to the proposed solution

*NOTE: A pricing document has been attached with the iRFP for clarification on pricing for all resources that CodeCombat offers and would be possible for HCPS to purchase.

	Price
Price per Student (provide details if tiered pricing is offered)	See Attached Pricing Document
Price per Teacher	NA, CodeCombat does not charge per teacher for licenses
Price per Classroom	NA, CodeCombat does not charge per classroom for licenses
Price per Site	$6,000 per site
Price for District License 6-12	NA, CodeCombat does not do their license structure this way

Virtual training to introduce teachers to the platform, inform how to find user instructor materials and answer questions.	Implementation Training. See attached pricing document
Additional Professional Development models	$2,000 per teacher. Reference the Professional Development Flyer and TOC for more information
Printed materials - provide list of pricing for each product offered	NA
Consumables - provide list of pricing for each product offered	NA

CodeCombat's 2021 Standard Tiered Pricing

# of Users	CodeCombat and Ozaria
Up to 99 Students	$50/student
100 to 249 Students	$35/student
250 to 499 Students	$27/student
500 to 899 Students	$22/student
900 to 1,499 Students	$19/student
1,500 to 2,399 Students	$16/student
2,400+ Students	$14/student

Multi-year Discounts (Not available for pilots)
***TCV = Total Contract Value**

Paid Upfront - (2 years)	15% off TCV
Paid Upfront - (3 years)	20% off TCV
Paid Upfront - (4 years)	25% off TCV
Paid Upfront - (5 years)	30% off TCV

2021 Standard Pricing - Professional Development

Professional Development	Cost Per Teacher
Standard Pricing	$2,000
Early Bird Pricing - before its release in August	$1,500

2021 Standard Pricing - Implementation Training

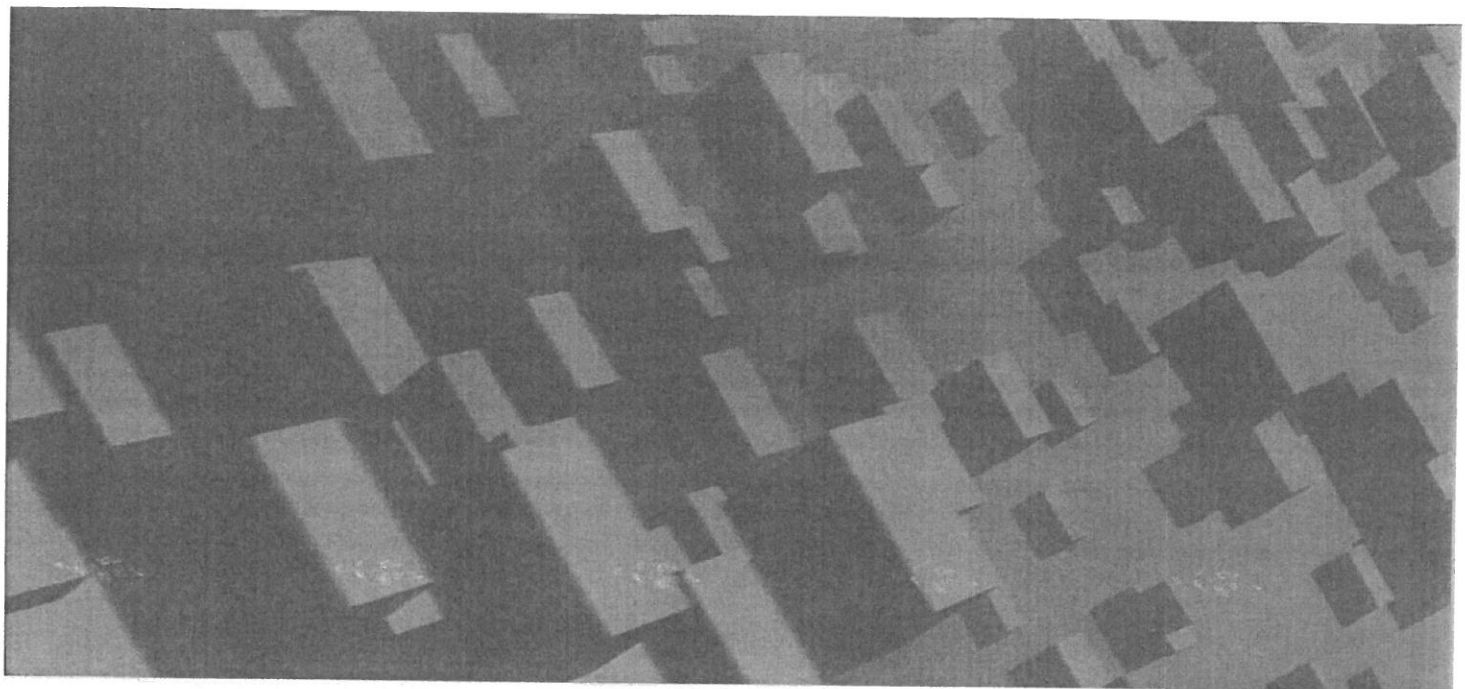
School-Wide Training (up to 10 attendees)	$500
District-Wide Training - includes 1 admin session and 1 teacher session 2 teacher sessions (up to 25 attendees)	$1,000

2021 Standard Pricing - AI League (Esports)

School Customized Tournament Option 1	$1,000 per school per year
School Customized Tournament Option 2	$500 per school per season
District Customized Tournament	Customized pricing for each district

EXCEPTIONS

CodeCombat does not have any exceptions to highlight here



McREL INTERNATIONAL

CodeCombat
Implementation Study

Summary Report
February 2019

Shelby Danks, Ph.D.
Brittney Fraumeni
Matthias Smrekar

4601 DTC Boulevard, Ste. 500
Denver, CO 80237
mcrel.org

Founded in 1966, McREL International is a not-for-profit corporation with offices in Denver, Colorado; Honolulu, Hawaii; and Charleston, West Virginia. McREL delivers high quality program evaluation services and develops award-winning reports to provide clients with timely information to improve their programs and document their successes. McREL staff members work collaboratively with clients to build their planning, data, and program evaluation capacity through just-in-time consulting and training. McREL's evaluation services are grounded in the latest research methods and evaluation best practices.

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Project Overview and Purpose

CodeCombat is an organization committed to "making programming accessible to every student on Earth." *CodeCombat* empowers teachers to teach computer science via an online course platform that provides all teachers, even those who have no prior experience with programming, with a class-in-a-box solution. *CodeCombat* is a real game that teaches learners of all ages to code by playing through levels and quickly mastering programming concepts. It's not just gamification with bells and whistles, it's democratizing learning to code by making the process more accessible and engaging than ever before. and arts education, and to creating a positive environment for the arts through societal change.

McREL International (McREL), an education research organization, was contracted by *CodeCombat* in August 2018 to serve as the third-party evaluator of *CodeCombat* implementation, and to report results from its current users as of October of 2018. McREL used a descriptive survey research approach to understand teacher implementation of *CodeCombat*, as well as a case study approach of a select number of these users to better under usage of *CodeCombat*. Both the survey research and case study methodologies work in tandem to uncover teacher perceptions of *CodeCombat*, issues associated with processes and implementation, and perceived impacts on student engagement and learning. However, this summary report contains the results from the investigation of teacher implementation and perceived impacts of *CodeCombat*.

About the Study

McREL collaborated with *CodeCombat* leaders to design a descriptive survey research investigation to understand how *CodeCombat* has been implemented among current users, teachers' impressions, the extent to which teacher self-efficacy has changed as a result of using *CodeCombat*, and teachers' perceptions of student levels of enjoyment, engagement, and learning. Table 1 summarizes the research and supporting questions that were used to inform the scope, methods, data collection strategy and instrumentation, and analysis of findings for the investigation.

Table 1: Key Research Questions

Focus Area	Guiding Research Questions	Supporting Questions
Implementation	In what ways has *CodeCombat* been implemented?	What is the frequency of implementation? Student completion? How do teachers use ancillary materials (lesson plans)? How is *CodeCombat* implemented?
Teacher Impact	What are teachers' **impressions** of *CodeCombat*?	Does *CodeCombat* meet teacher expectations? Are teachers able to incorporate *CodeCombat* with their other lessons / activities?
	Has **teacher self-efficacy** changed as a result of implementing *CodeCombat*?	What professional development has been completed? What are teachers' comfort levels with different aspects of implementation? What role do teachers serve during student use of *CodeCombat* (has this changed over time)?
Perceptions of Student Impact	What are the **perceived levels of student enjoyment, engagement, and learning**?	Are there differences among student subgroups in terms of their engagement and perceived learning outcomes? How do students experience productive struggle?

Summary of Methods

Consistent with best practice in the measurement of implementation and perception of impact of products and/or services among service-oriented organizations (e.g., Marr & Creelman, 2011; Napier & McDaniel, 2006; Poister, 2008; Primer, 1995), as well as with principles of universal design (Hanington & Martin, 2012), McREL collaborated with *CodeCombat* to develop a Teacher Implementation and Perceived Impacts Survey to collect information for each of the four guiding research questions. Additional *CodeCombat* usage data were gathered from teachers (subject to their individual consent) to provide additional insight into teacher implementation and use. These methods are further summarized below.

- **Teacher Implementation and Perceived Impacts Survey**: Current users of *CodeCombat* (who had used the tool for at least one month as of October 2018) were invited to complete a Teacher Implementation and Perceived Impacts Survey in October of 2018. The survey contained 15 selected-response items that solicited information about teacher implementation and resources utilized, as well as another six items that asked teachers to indicate the key instructional strategies where *CodeCombat* is used, each of which were measured on a 5-point Likert scale (Strongly Agree to Strongly Disagree). Also, to uncover insights about teacher impact (perception of features and expectations), self-efficacy, and perceptions of student impact, the survey also contained multiple items that asked teachers to rate their perception of *Feature Engagement* (6 items), *Teacher Expectations* (8 items), *Teacher Self-Efficacy* (8 items), *Perceptions of Student Impact* (9 items), each of which were measured on a 5-point Likert scale (Strongly Agree to Strongly Disagree). A total of $n = 170$ teachers participated in the Teacher Implementation and Perceived Impacts Survey.

Participants

Figures 1 – 5 describes the $n = 170$ teachers who participated in the Teacher Implementation and Perceived Impacts Survey. *Note: Not all participants identified themselves for each of the demographic questions.*

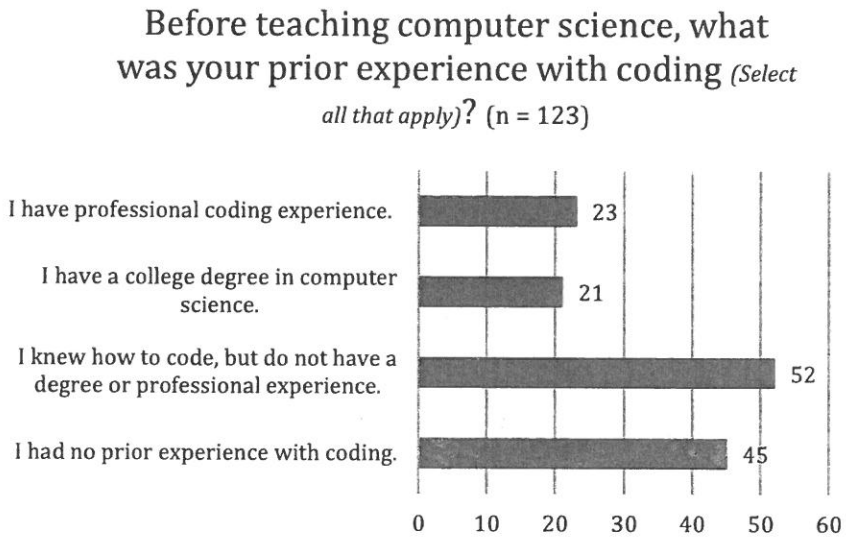


Figure 1. Prior experience with coding

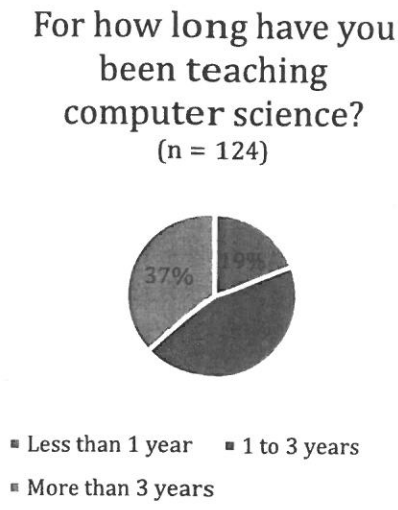


Figure 2. Prior experience teaching comp science

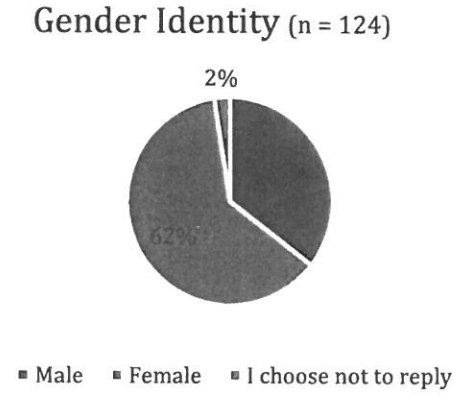


Figure 3. Participant gender identity

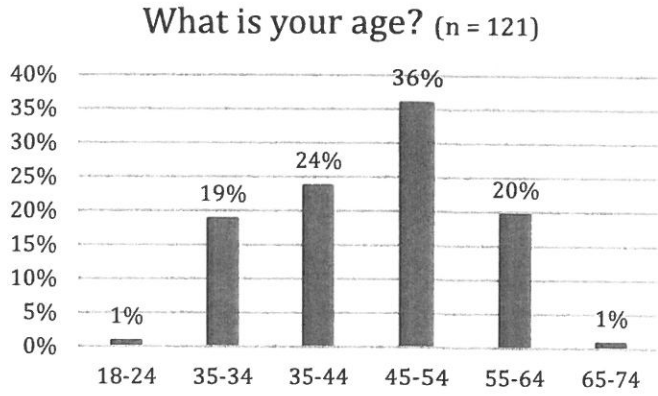


Figure 4. Participant age

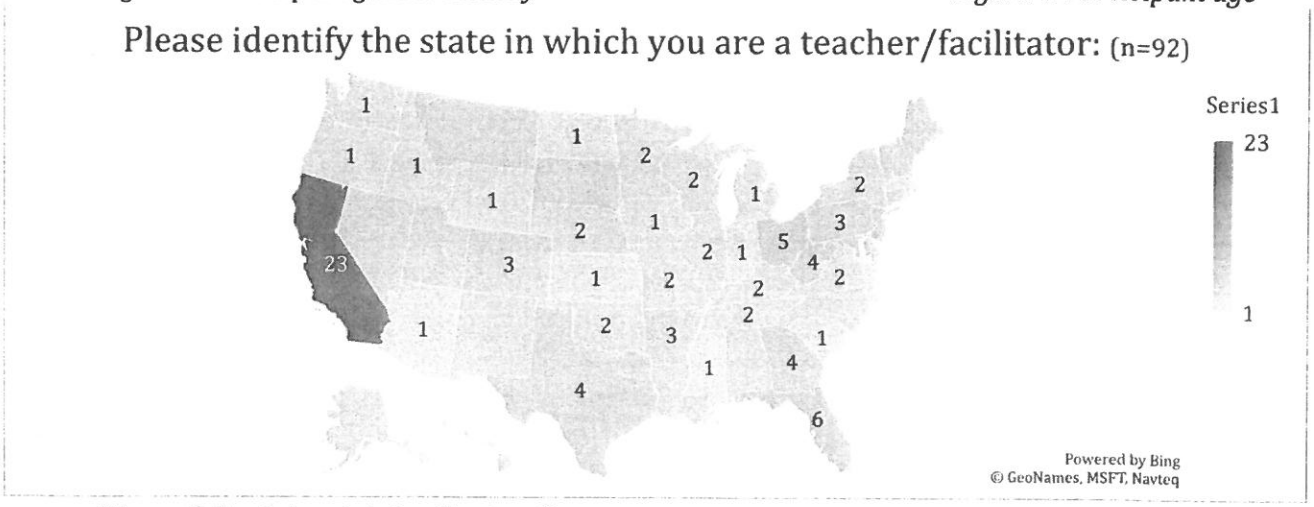


Figure 5. Participant state of instruction

Implementation

The Teacher Implementation and Perceived Impacts Survey was utilized to understand the ways that *CodeCombat* is implemented by teachers. The survey asked teachers to indicate the methods they use to embed *CodeCombat* into their instruction, describe other critical attributes of their implementation of *CodeCombat* games, and report on how they utilize the use tools and resources within the *CodeCombat* program (Figures 6 – 11).

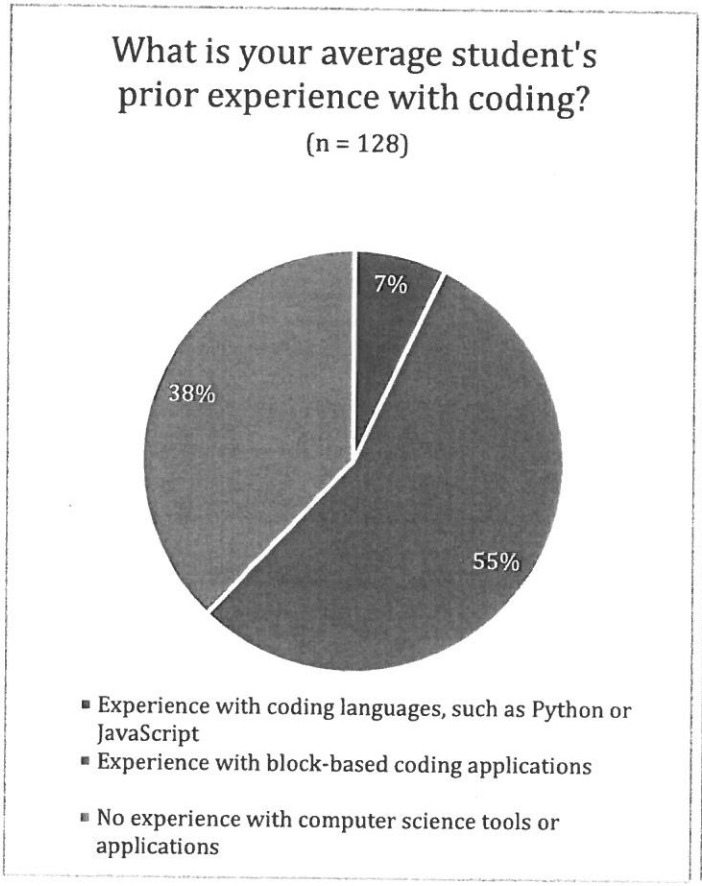


Figure 6. Teacher-reported student coding experiences

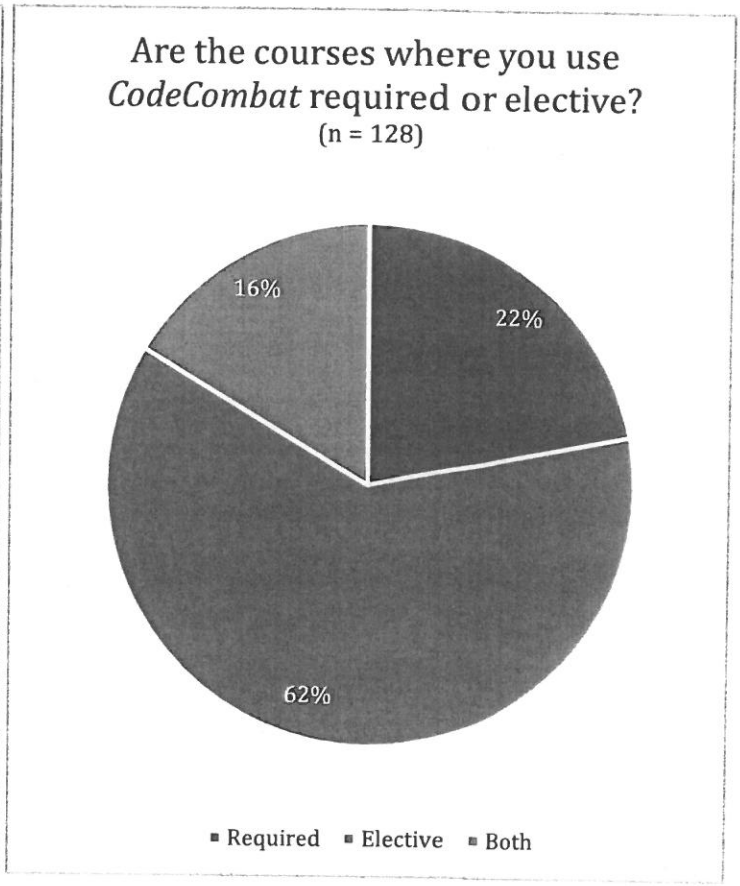


Figure 7. Course type during CodeCombat use

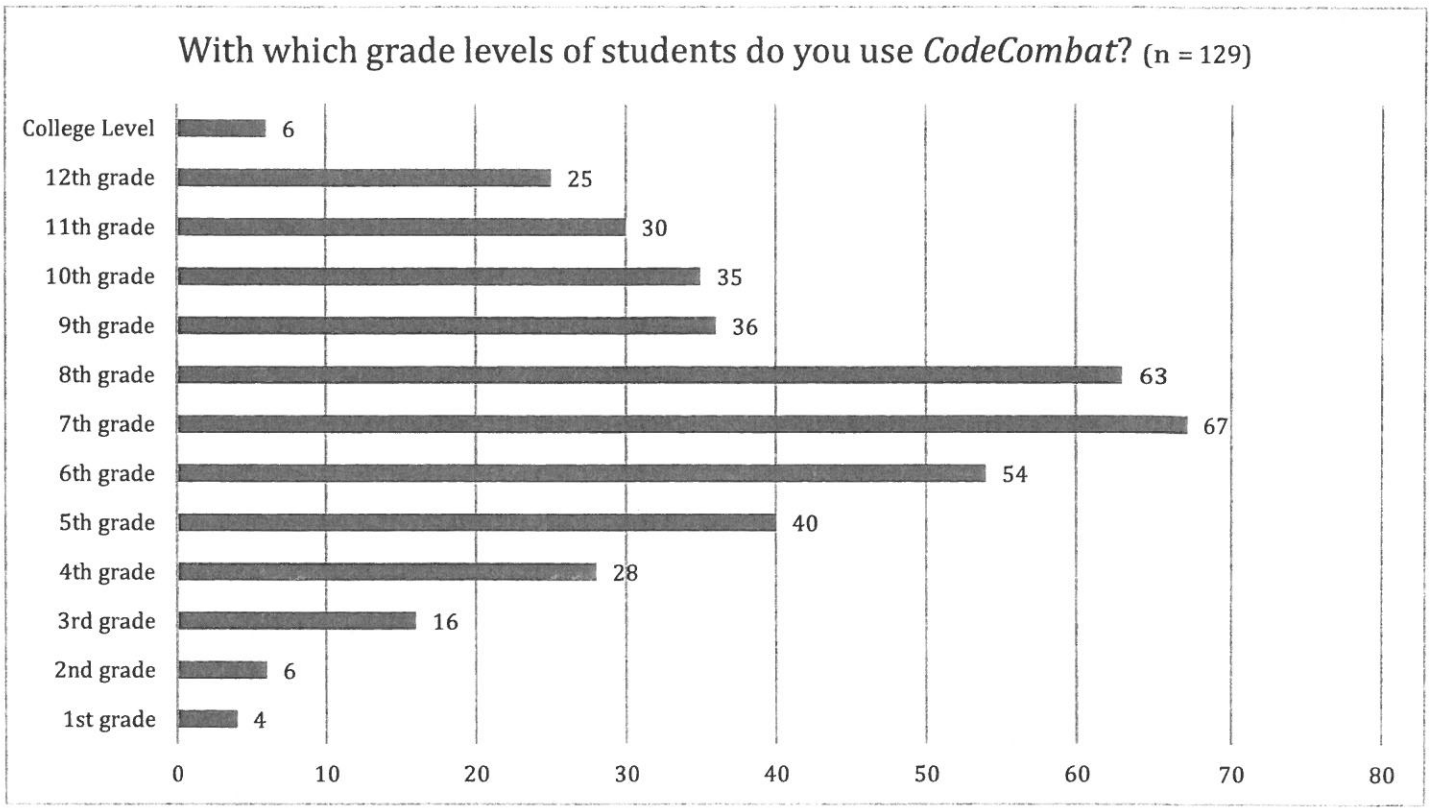


Figure 8. CodeCombat use by grade

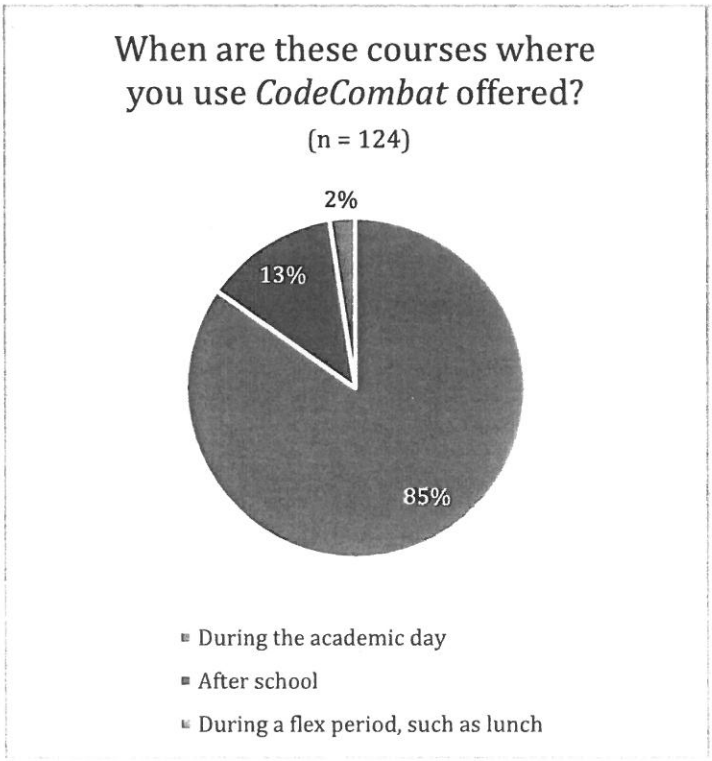


Figure 9. Timing of CodeCombat courses

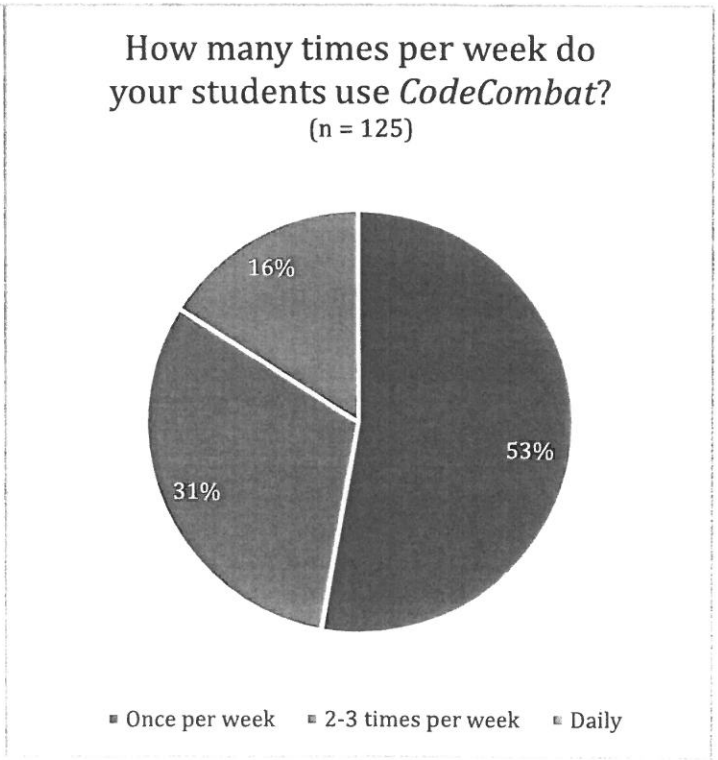


Figure 10. Weekly use of CodeCombat

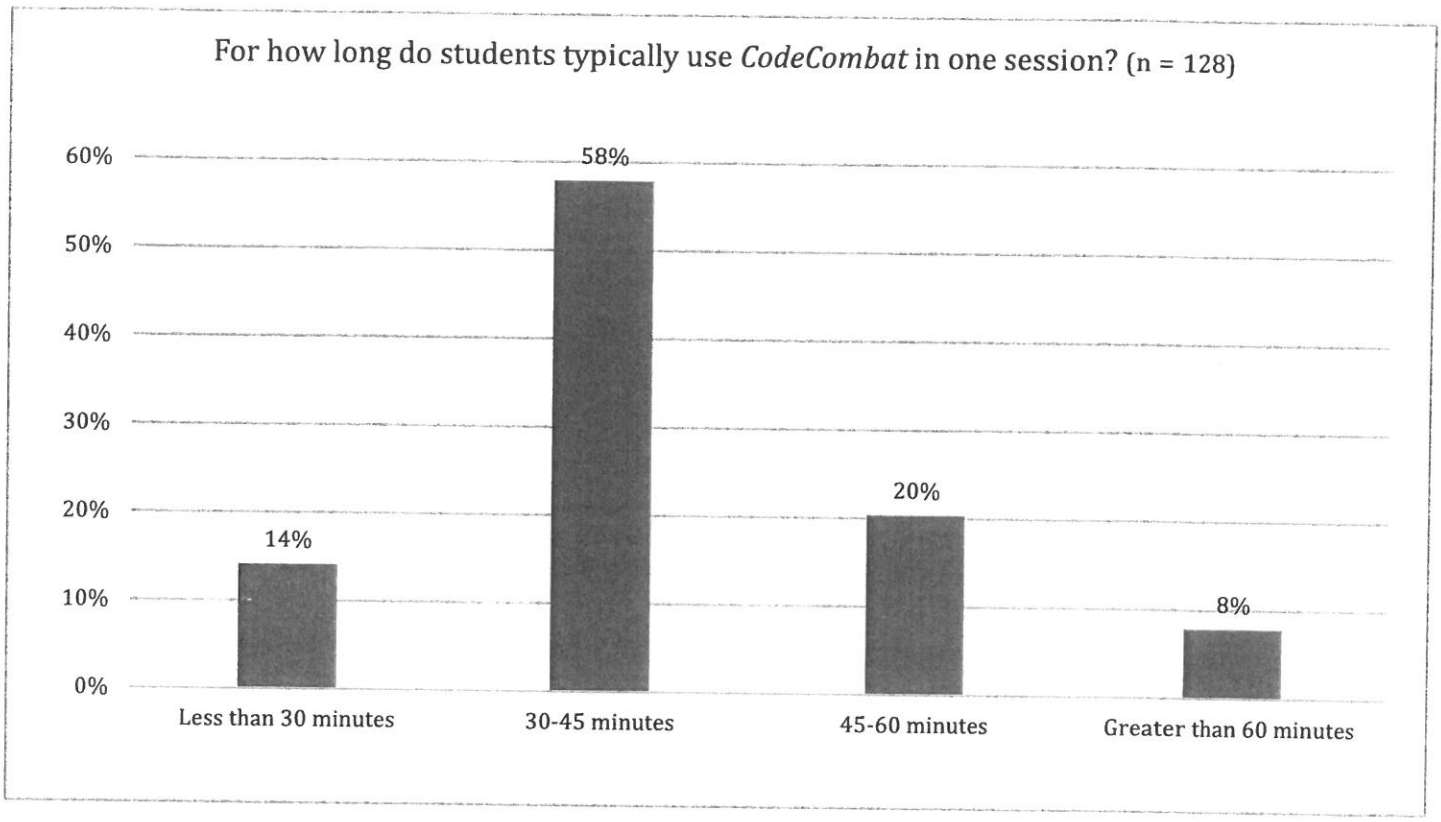
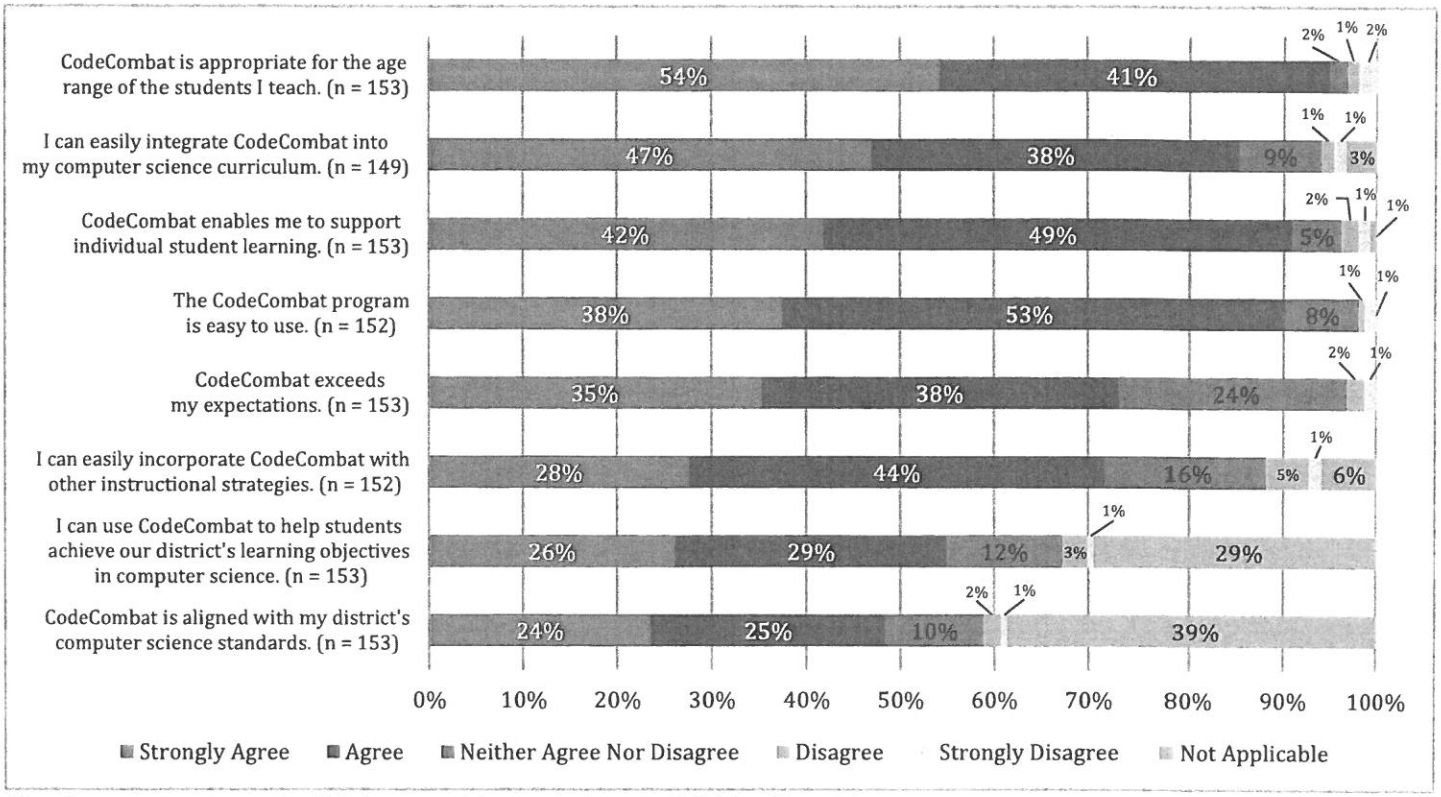


Figure 11. Length of typical CodeCombat session

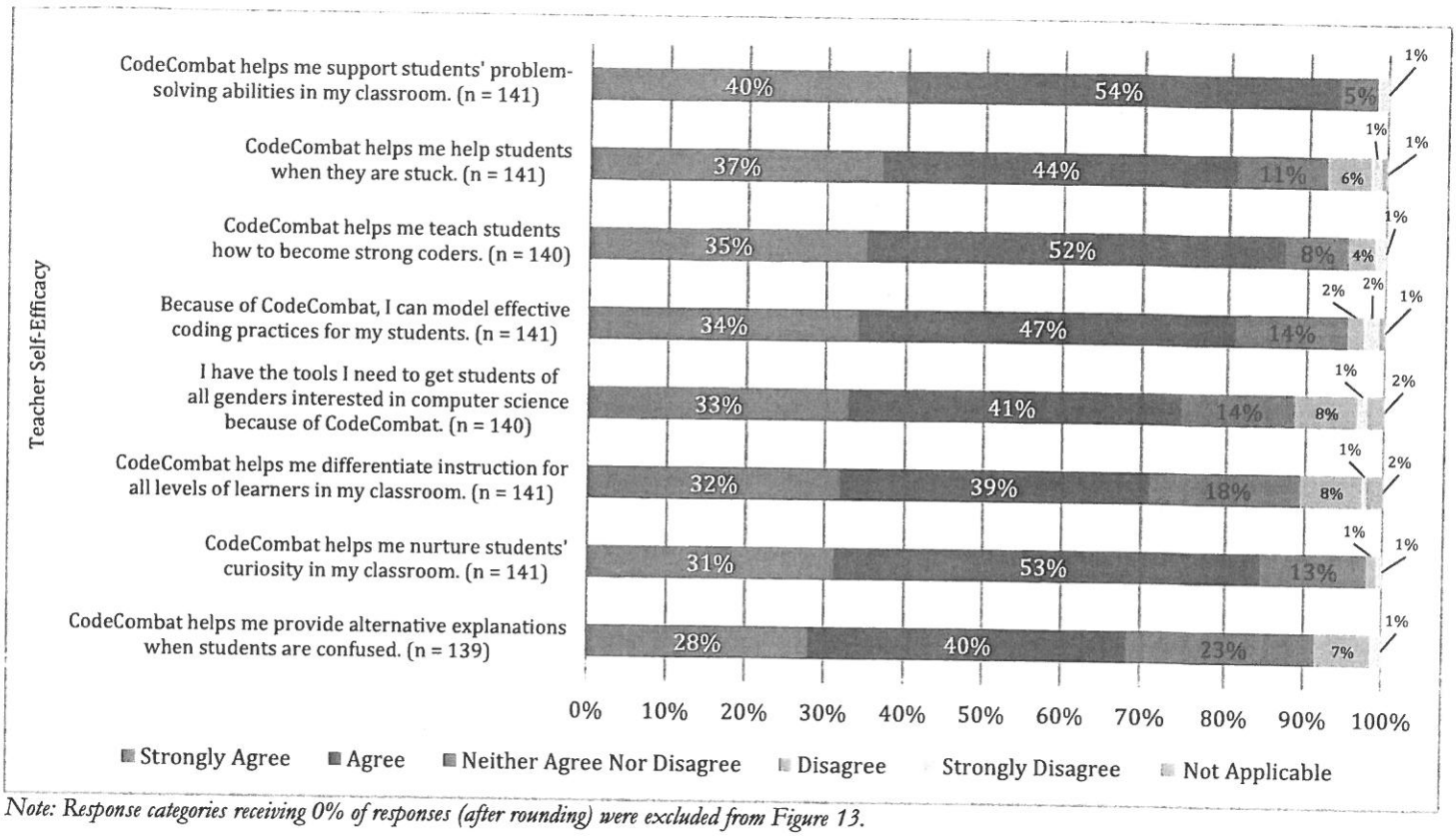
Teacher Impact

To understand teachers' impressions and self-efficacy as a result of using *CodeCombat*, the teachers were asked on the Teacher Implementation and Perceived Impacts Survey to assess whether *CodeCombat* met their expectations (Figure 12) and contributed to their self-efficacy (Figure 13).



Note: Response categories receiving 0% of responses (after rounding) were excluded from Figure 12.

Figure 12. Teacher expectations for CodeCombat use

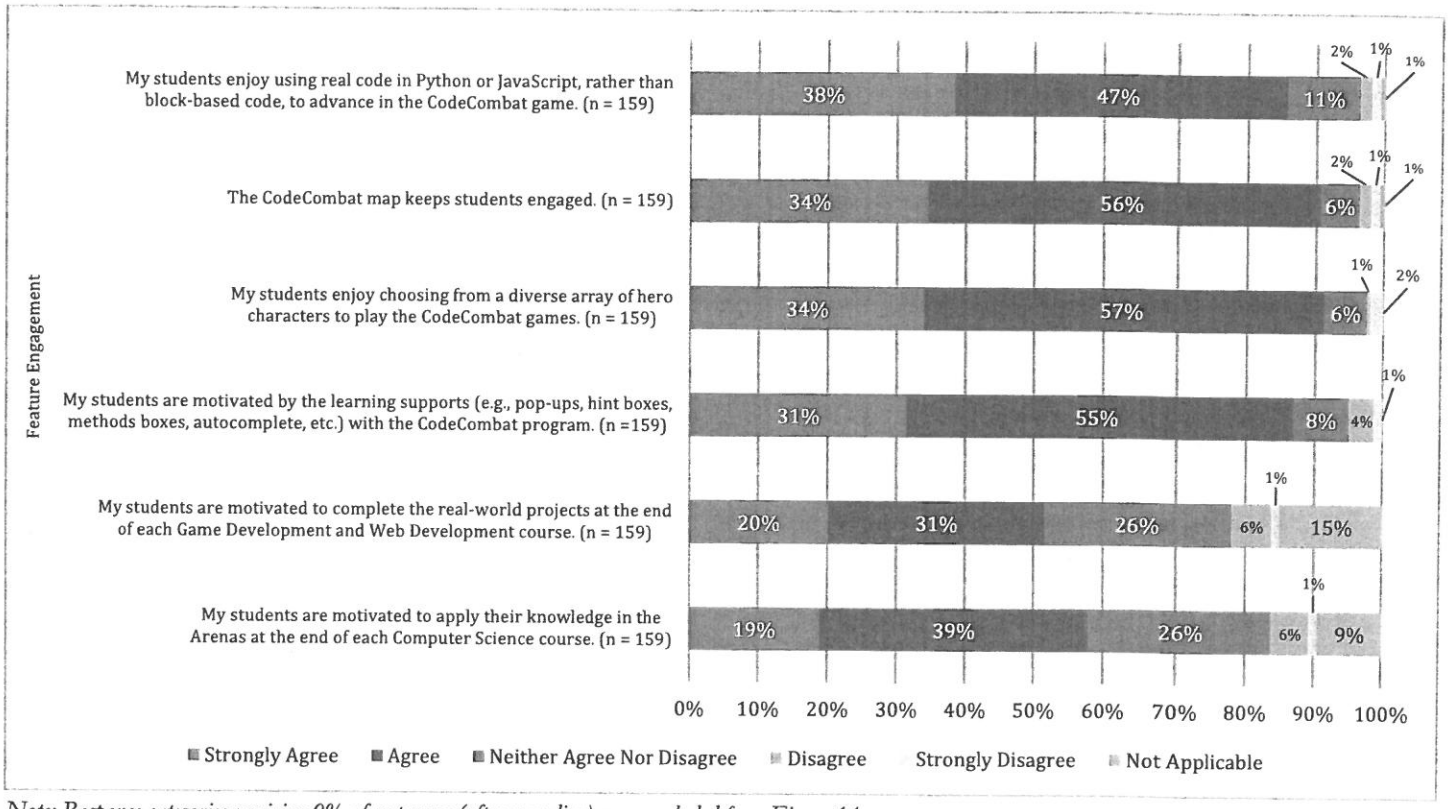


Note: Response categories receiving 0% of responses (after rounding) were excluded from Figure 13.

Figure 13. CodeCombat effects on teachers' self-efficacy

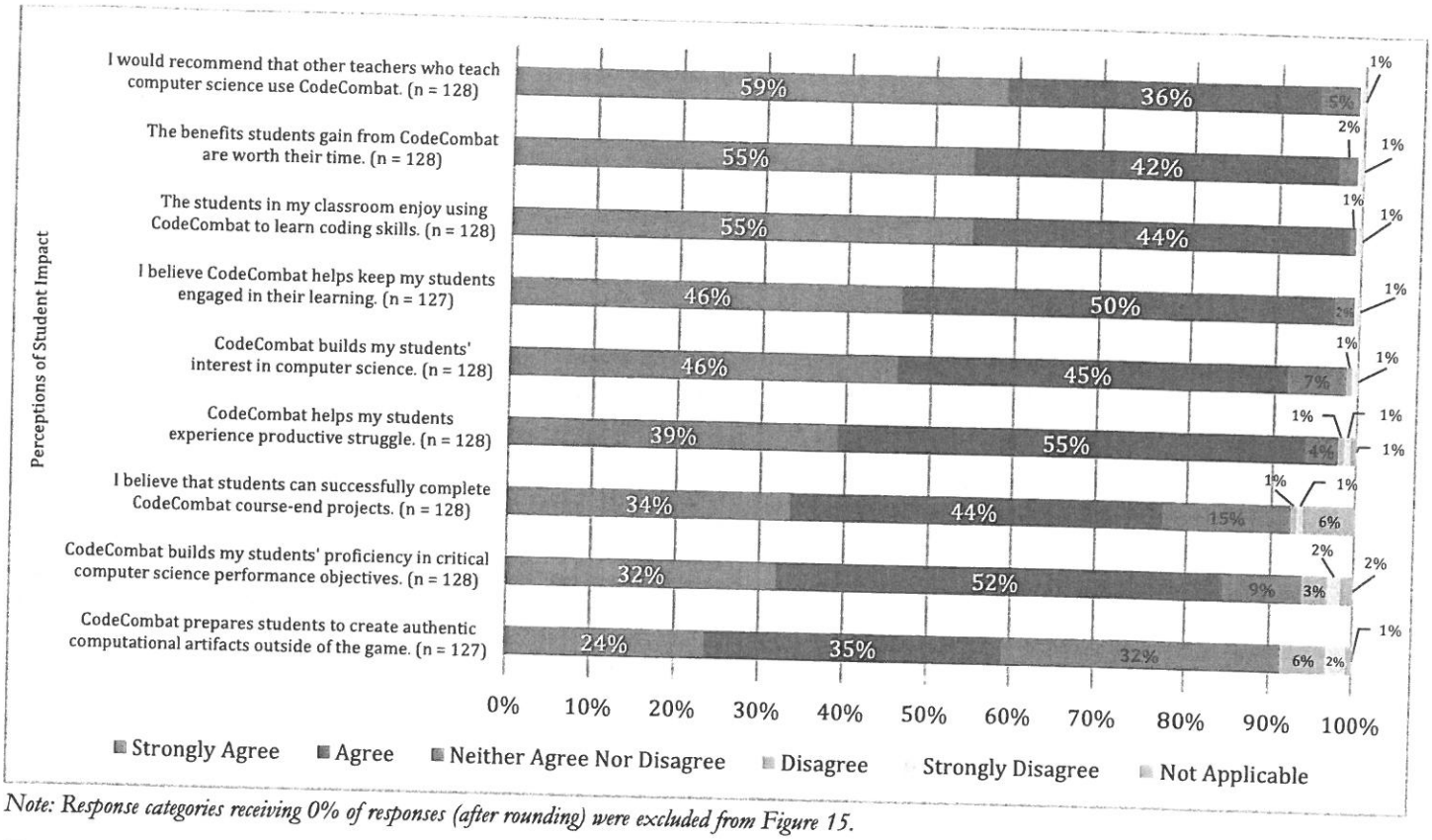
Perceptions of Student Impact

To assess teacher perceptions of student impact, the Teacher Implementation and Perceived Impacts Survey asked teachers to rate their perception of student engagement and impact on students (Figures 14-15).



Note: Response categories receiving 0% of responses (after rounding) were excluded from Figure 14.

Figure 14. Teacher perceptions of student engagement with CodeCombat



Note: Response categories receiving 0% of responses (after rounding) were excluded from Figure 15.

Figure 15. Teacher perceptions of CodeCombat impact on students

Participant Reasons to Recommend *CodeCombat*

The Teacher Implementation and Perceived Impacts Survey also asked participants, "Would you recommend *CodeCombat* to other teachers? Please use the space below to tell fellow teachers why they should use *CodeCombat*?" Figure 16 illustrates the key themes that emerged from their responses, and Table 2 lists sample comments for each key theme.

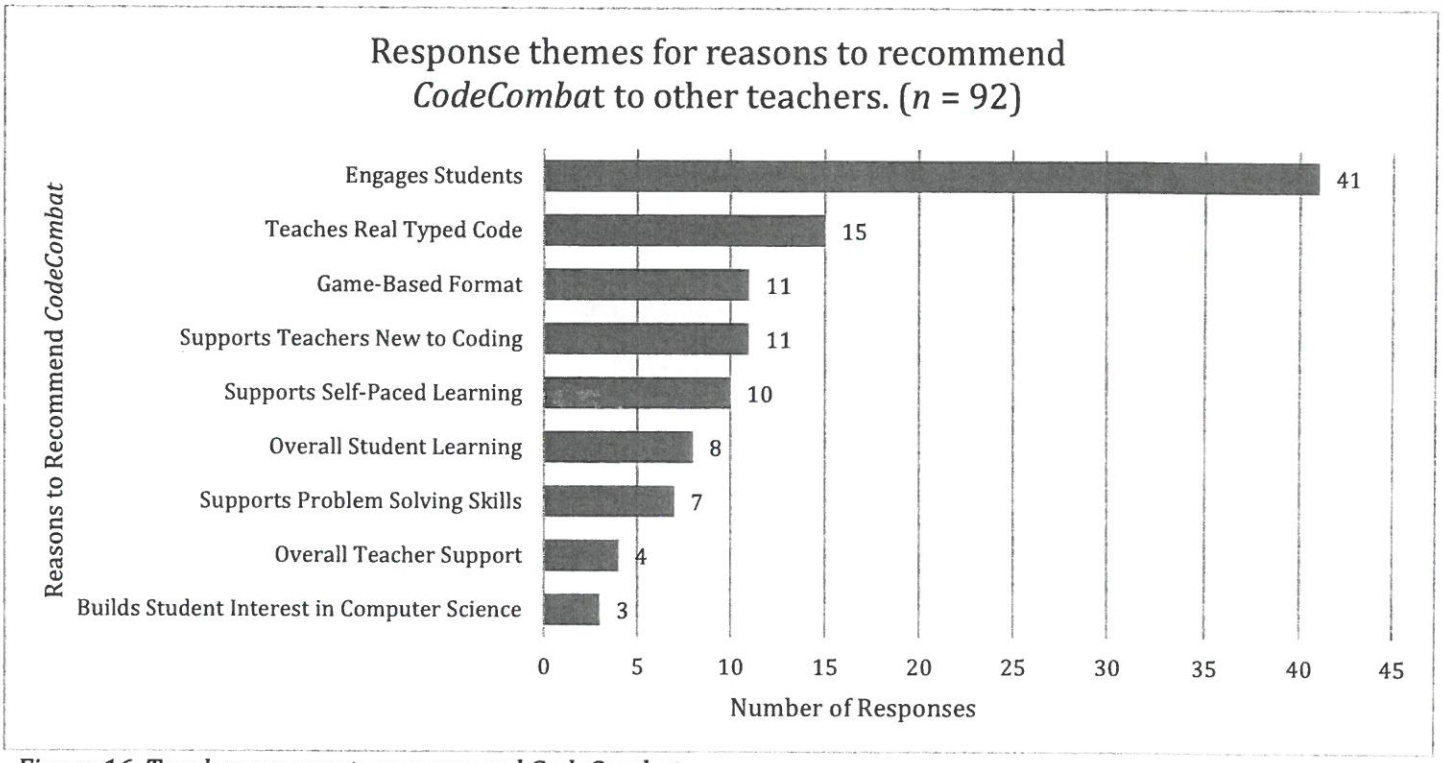


Figure 16. Teacher reasons to recommend CodeCombat

CC-3

Table 2: Sample Comments – Reasons to Recommend

Topic	Sample Comments
Engages Students	• CodeCombat gives my student the ability to apply the concepts taught in class in a fun and low-stress manner. • Coder combat offers an engaging, fun platform for students to learn coding basics for both Python & javaScript. It engages all students, even non-gamers and those that have trouble grasping computer science concepts. • It is a fun and easy way to get students engaged in learning about computer science and coding.
Teaches Real Typed Code	• Highly engaging for students yet provides the additional challenge of using text-based coding that relies on things such as punctuation and indentation to function properly. • CodeCombat is an excellent tool for your child to learn "real" coding in a fun way. • I am glad that the program starts the kids writing code out instead of drag and drop blocks. This helps them learn the importance of syntax and makes it easier to transition into other aspects of code and programming later. • The best way for children to begin real coding!
Game-Based Format	• All the children in my class are gamers, so having them play a game that teaches them something is a win-win • Code Combat has a game like format that encourages students to use coding to solve programming problems and make their hero move forward in the game. This provides motivation for them to keep pushing through difficult problems. • CodeCombat combines what students love to do (gaming) with what skills teachers need to teach (coding) in a platform that allows students to play the game while also learning how to design the game code.
Supports Teachers New to Coding	• A great resource for the teacher who is new to coding and easy to learn with your students. • CodeCombat provides a complete lesson plan package. As a teacher, I'm given all the materials I need to do my own lesson, then the students can go at their own rate online with an entertaining and informative application. The student coding includes help for the students, and it encourages them to work with each other. At the end of the lesson, CodeCombat has provided me with the questions for students to reflect and write in their journals. • As a first-year Computer Science teacher my first thought was "Where do I start?" Combat Code introduced me into the syntax which was a great jumping in point.
Supports Self-Paced Learning	• Allows them to work at their own pace and provides hints to help them complete a level. The teacher has more time with individual pupils and can encourage pupil to help each other. • CodeCombat is a great way to engage students in a structured self-paced program to learn to code. • As a teacher, I'm given all the materials I need to do my own lesson, then the students can go at their own rate online with an entertaining and informative application.
Overall Student Learning	• Codecombat was beyond my expectations as a teacher. I learned and watched a lot the development and progress of my students. Congratulations to the whole team. Perfect computer programming language learning tool. • A thoroughly engaging and challenging program that has assisted many, many students to gain a good understanding of coding and software creation.
Supports Problem Solving Skills	• Excellent for teaching children problem solving skills. • I love Code Combat because it teaches students to problem solve and use their critical thinking skills in a game-based lesson.
Overall Teacher Support	• It's easy to create classes and add students and the Google Single-Authentication makes the process a lot easier if you're a Google District. • The teacher dashboard allows me to easily track student progress. • CodeCombat comes with lesson plans as well as the actual coding game which engages students and allows them to use real code!
Builds Student Interest in Computer Science	• Prior to using CodeCombat I probably had about 6-7 students total who were interested in learning Coding or taking AP Computer Science Principles. After letting CodeCombat spread via word-of-mouth I've actually had to open a second section of Coding and later turn away students because the room/lab would not accommodate additional students.

Note: A total of n = 99 users provided explanations for why they would recommend CodeCombat to other teachers. Participant responses in Table 2 are provided verbatim.

Summary of Findings

Theme 1. Teachers' **perceptions of student impact** reflect a widespread belief that *CodeCombat* supported student engagement, motivation, and interest in coding and computer science.

- 90% of teachers agreed or strongly agreed that *CodeCombat* keeps students engaged; 97% agreed or strongly agreed that the benefits students gain from *CodeCombat* are worth their time.
- 99% of teachers agreed or strongly agreed that students in their classroom enjoy using *CodeCombat* to learn coding skills.
- 95% of teachers agreed or strongly agreed that they would recommend *CodeCombat* to other teachers who teach computer science.

Theme 2. Responses to questions about **teacher impact** indicated that *CodeCombat* generally surpassed teachers' expectations as an easily-integrated tool to support students' learning, while improving self-efficacy in teaching computer science and coding.

- Most teachers agreed or strongly agreed that *CodeCombat* was appropriate for their students' age range (95%), enabled them to support student learning (91%), and was easy to integrate into their computer science curriculum (85%).
- *CodeCombat* supported teachers' self-efficacy by helping them support students' problem-solving, model effective coding practices, and nurture students' curiosity in the classroom, among others.

Theme 3. *CodeCombat* **implementation** occurred most frequently with middle school students (grades 6-8) during school-day computer science courses.

- 46% of teacher reported using *CodeCombat* to supplement existing computer science curricula; 38% used *CodeCombat* as their core curriculum resource for computer science.
- Most teachers (53%) reported using *CodeCombat* once weekly; approximately 16% of teachers reported using *CodeCombat* daily.
- Teachers reported that students' *CodeCombat* sessions typically lasted approximately 30-45 minutes, with 82% of students completing between one and three *CodeCombat* courses in a semester.

Theme 4. **Teachers reasons for recommending *CodeCombat*** included increased student engagement and motivation, ease of implementation, and the fact that the program introduces students to "real" coding in a fun and motivating way.

References

Hanington, B., & Martin, B. (2012). *Universal methods of design: 100 ways to research complex problems, develop innovative ideas, and design effective solutions.* Rockport Publishers.

Primer, A. M. (1995). The American Customer Satisfaction Index (ACSI) Technology: A Methodological Primer. Chemometrics and Intelligent Laboratory Systems, 30, 109-115.

Marr, B. & Creelman, J. (2011). More with less: Maximizing value in the public sector. Basingstroke: Palgrave Macmillan.

Napier, R., & McDaniel, R. (2006). Measuring what matters. Mountain View, Calif: Davies-Black Publishers.

Poister, T. H. (2008). Measuring performance in public and nonprofit organizations. John Wiley & Sons.

CODE COMBAT

River Ridge High School
Excelling on the AP Exam

Andrew Forsman
Engineering Teacher
New Port Richey, FL

Implementation

Grades Taught	9-12
Length of Use	2 years
Students Enrolled this Year	29

Courses Covered

- CompSci 1 – CompSci4
- GameDev 1 – GameDev 3
- WebDev 1 – WebDev 2

Success Highlight

"The scores on the AP exam were much higher than I expected, and I believe CodeCombat is the reason why this was the case."

River Ridge High School in New Port Richey, FL is 38 miles north of Tampa and a short drive to the waters of the Gulf of Mexico. One of eighteen high schools in the district of Pasco County, River Ridge High houses one of only two Career Academies that teach engineering. Students apply to be accepted into the program and are welcomed into a learning community of like-minded students and dedicated teachers.

One of those dedicated teachers at River Ridge High School is Andrew Forsman. With a master's degree in civil engineering, Forsman only had minimal experience with computer programming, but jumped at the chance to teach the school's first AP Computer Science Principles (AP CSP) class when Assistant Principal, Jessica Meek, approached him about teaching the course.

River Ridge was one of only two schools in the district preparing to offer AP CSP, so expectations were high. "As last school year was the first year we offered computer science, our goal was to get as many students to pass the AP test as possible," Forsman says. To achieve this mission, Forsman had to find a curriculum solution that would allow him to work through his own inexperience with coding, to guide as many students as possible to AP CSP exam success, and to truly inspire his students to learn Python.

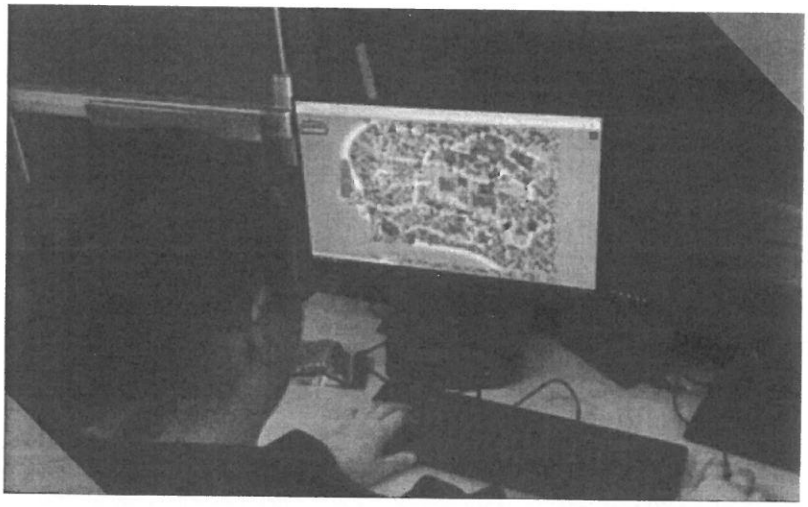
Challenges

Forsman's first challenge was to find a way to teach computer science despite his inexperience. While Forseman was vaguely familiar with coding for robots through another engineering course he taught, it was very different from the Python and programming concepts he would have to teach in an AP CS level course. "I had a minimal amount of experience [coding]. I never really took [...] any kind of computer programming classes in college or high school," Forseman explains. "So I didn't really have any formal schooling in it."

Forsman had the added challenge of looking for a program that would support differentiated instruction in his classroom. Experience levels vary in his class Forsman explains, "Five or six of the 17 [students] I had, have been on the robotics team, so they had been coding for three to four years. Then I had another group of kids that had no experience at all. So I definitely had a mixed variety." Forsman was determined to introduce advanced coding concepts to all his students in order to ensure success on the AP CSP exam and meet the goals set by the administration. Assistant Principal Meek felt it was important to support coding and computer science at the school because as she states, "Coding is in high demand in such a wide variety [of] careers and pathways." In Florida alone there are 18,272 open computing jobs and 500,000 across the country.[1] Meek's biggest expectation was not only for the most amount of students to pass the exam but also "that the number of students increases each year."

Forsman's final challenge was one that he hadn't anticipated being so difficult: to find a product to teach real Python that would capture the curiosity of his students and be rigorous enough to teach advanced programming concepts. Solutions that Forsman was using "allowed students to learn the Python language," he says, but they "did so in a matter that was not very engaging."

Implementation



Forsman was driven to find a program for River Ridge that would help him meet his three goals. Forsman explains his most important criteria for choosing a solution was allowing lessons to be self-paced and having as much support within the game as possible: "I wanted a platform that allowed self-guidance [...] My personal computer coding experience was very limited prior to teaching last year and [I] wanted as much assistance as possible."

In 2017, the school supported Forsman by providing AP training and sending him to the AP Summer Institute (APSI),[2] which offers AP educators intensive professional development. It was at APSI that Forsman learned about CodeCombat. "I was just looking for content and thinking about what can I use to teach it," he says. "And the AP instructor there introduced me to CodeCombat. He said he uses it for all his classes and all his kids love it."

1 https://code.org/promote/fl
2 https://apcentral.collegeboard.org/professional-development/workshops-summer-institutes/about-summer-institutes

When Forsman took the opportunity to test out CodeCombat for himself he realized it was just what he needed for his class. A few months later, Forsman had secured full curriculum licenses for 18 AP students. Forsman found that CodeCombat was flexible enough for all his students and didn't compare to any other coding product he tested:

> **"CodeCombat is the best. The curriculum is the most intuitive and easy to understand of any curriculum to teach computer science."**
>
> **Andrew Forsman, Engineering Teacher**

High Engagement Results In High Achievement

Forsman uses CodeCombat with his current roster of AP students two to three times a week for up to 45 minutes at a time. In each nine-week marking period, students are given CodeCombat assignments to complete in either JavaScript or Python. In the second semester, if students are eager to learn more languages like Java or C++, Forsman encourages students to do so on their own. Most of his students typically enjoy learning Python the most. "Some kids that do robotics will do C++, but most of them end up choosing Python just because they liked what CodeCombat was and how they learned it," Forsman said.

Forsman teaches grades 9 through 12. Each student is coming in with varied experience levels and support systems at home-- so it's important that students have the flexibility to complete assignments at their own pace within the established due dates. CodeCombat courses are composed of various levels students play through that teach them concepts such as *syntax*,

47 Total Students
29 Current Students

Students at River Ridge High School have written:

6,594	134,077	121
computer programs	*lines of code*	*games and web projects*

Concepts Learned

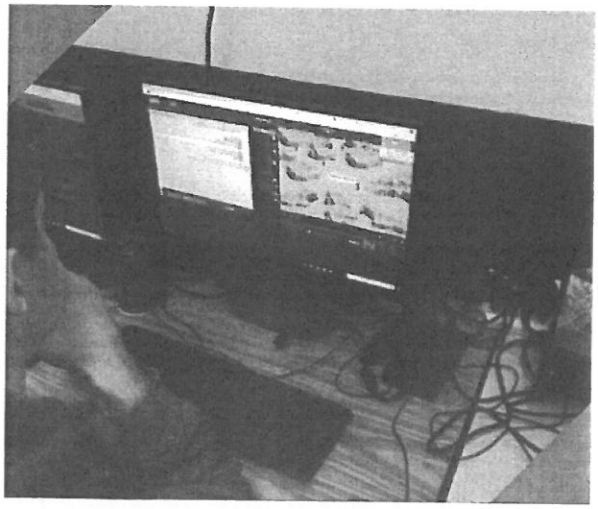
Arguments	Advanced HTML
While Loops	Basic Javascript
Variables	Arithmetic
Algorithms	Input Handling
If Statements	Boolean Logic
Functions	Arrays
Parameters	Break Statements
Advanced Strings	Continue Statements
Basic Game AI	Event Data

variables, loops, and if statements to more advanced topics within the game and web development courses. Forsman explained that on a day when a student is using CodeCombat they will come into class and begin a given CodeCombat level. "As I let students progress at their own pace, many students will be on different lessons," Forsman said.

Forsman says students being on different levels is fun for them and keeps them engaged in what they're learning. If questions arise, he is available to assist the student. If Forsman is unable to find a student's error, he'll review the level solutions on the teacher dashboard and use that to help students progress through the levels. One of the features of CodeCombat that Foresman appreciates is how each level is "broken down" and "allows students to build their knowledge of Python slowly, but surely in a way that builds student confidence." Forsman adds, "It has made learning Python very fun."

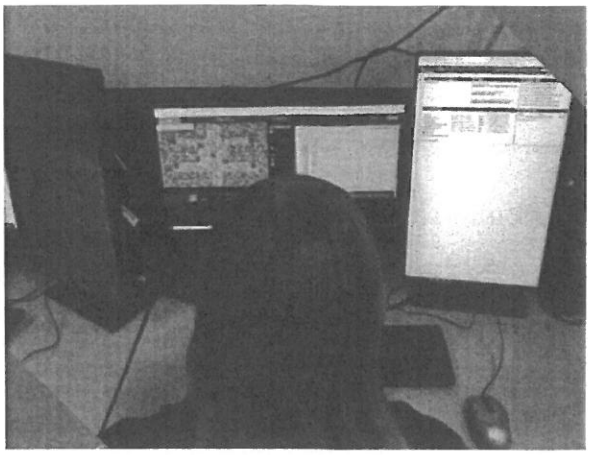
CodeCombat works for Forsman's self-paced class because it gives his students all the tools they need to be independent learners invested in their own success. Forsman says that "The nature of CodeCombat allows my students to progress and meet my goals."

> **"What I found is that [CodeCombat] is very user friendly. A student can just log on and it walks them through the steps of what they need to do. It also assists them with how to solve the problem without necessarily just going to the instructor and saying 'I need the answer key.'"**
>
> **Andrew Forsman, Engineering Teacher**



Forsman is able to take advantage of moments when students may have problems working on a level and transform it into an opportunity for deeper learning when he can help students figure out "what line of code needs to be put in" or "what needs to be changed in order to get the program to function as being asked." Forsman also encourages students to ask each other for help, fostering opportunities for collaboration saying, "They will help each other out. I will [ask] before they call me over, 'Have you asked him?' because I know a couple kids will be a little bit farther ahead. And then they will."

Originally, Forsman would assign specific levels to students during the beginning of the year, but now allows students to choose their own levels in a designated course. "I had certain [levels] assigned first and second quarter," Forsman explained.



"Now, none of it's assigned but I still have kids playing in the game and coding. They'll even come in during lunch! They say it's just fun [and] that they enjoy doing it. For me, as a teacher, it's an easy way to get a kid engaged in learning how to code."

For Forman the most rewarding experience has been witnessing the impact CodeCombat and computer science has had on student educational and social-emotional growth.

Forsman talks about watching the growth of self-confidence in one of his students as they progressed through the class and began developing their own program required for their AP CSP performance task submission:

> **"There was one kid last year that started off not knowing much Python at all. Eventually, for his create task he used a Python compiler to make an awesome program, like a blackjack-esque program where he had any way that you could win or lose in blackjack. It was amazing! He said CodeCombat and learning Python that way helped him do it."**
>
> **Andrew Forsman, Engineering Teacher**

Tips for Teachers

Forsman's top recommendation to teachers is to allow students to feel like learning is a reward by letting them work at their own pace. Help students not feel overwhelmed by assignments by breaking lessons up and giving them clear guidelines and expectations.

> **"When the [student] doesn't have to feel like so much has to be done by a certain period of time, they are open and more engaged in it. And will give it a try. If they know they have to get all of it done in a short period of time they freeze up and don't do as much."**

Finding Success By Investing in Students

Last year, the student's hard work paid off. River Ridge was working with brand new data at the time, so Forsman had nothing to compare it to except previous performance from the AP physics class he once taught, saying:

> **"When I taught classes of 15, the most I ever had was maybe two or three [students] get a three or higher. So when I had 13 out of my 17 [students] get a three or higher a lot of them said what definitely helped them was learning CodeCombat and Python."**
>
> **Andrew Forsman, Engineering Teacher**

Students said they had played so much CodeCombat they didn't realize they were actually learning real Python as they were playing. Forsman said during the exam students were able to go "OK, well this missing condition is here" and ask "Well, what did I do in CodeCombat? I did this." Comparing what they had done on CodeCombat with the questions being asked helped students work through the test.

While implementing AP CSP was expensive, the result of investing in students has paid off for River Ridge and Forsman's students. Forsman said that Principal Meek was "thrilled" with the AP scores and so "excited by the student[s] achievement on the AP exam" that she was willing to renew for another year.

Principal Meek was not only impressed by test scores but also with how well the students are doing overall saying, "Mr. Forsman has done a tremendous job with the students, and they are excelling."

The class started in August 2017 with 18 AP students, but has since increased to 31 students, showing the popularity and success River Ridge had in their first year of AP CSP.

Unlocking Pathways to a Better Future

To Forsman, teaching computer science allows students to prepare for the rapidly evolving job landscape and grants them the ability to consistently problem-solve; a skill necessary for future careers. Forsman talks about the endless opportunities to innovate that computer science gives students. When he assigns a task to his students, "Five different kids can write five different programs that solve the same task," Forsman says. "That's what is really cool about computer programming and computer science."

The real value of investing in computer science is bigger than any one quantifiable number. Investing in students sends a message to them that they are capable and gives them the opportunity to explore pathways they never knew existed. Forsman talks about one student's newfound love of computer science she gained because of CodeCombat and the AP CSP class:

"There was a girl who got into it. And just learning, playing the game and going through the coding of CodeCombat inspired her. She was thinking of going into engineering but then she switched herself. She is going to college now for computer science. She graduated last year. That class and CodeCombat inspired her to want to do that."

CODE COMBAT

Riverdale High Schoo
Teaching Computer Science Without Prior Experience

Holly Ades
Technology Teacher
Fort Myers, FL

Implementation

Grades Taught	10-12
Length of Use	1 year
Students Enrolled this Year	26

Courses Covered

- CompSci 1
- CompSci 2
- GameDev 1
- WebDev1

Success Highlight

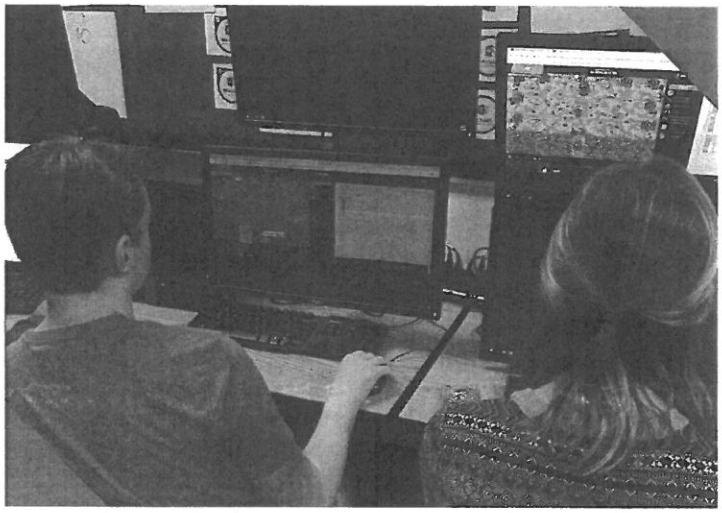
"I have a mixed variety of students with various learning levels. All of my students, regardless of their learning abilities, have enjoyed this program."

Riverdale High School in Fort Myers, Florida is just 160 miles west of Miami, where you find forest-lined rivers and wetland preserves a few miles away from some of the most innovative companies in the world.

A few years ago, Riverdale was faced with the exciting challenge of rolling out new state computer science policies that require a computer science class in every high school. The 2,167 students at Riverdale High would finally have access to computer science-- they just needed someone to teach it. Holly Ades answered the call. "They kind of asked who wanted to do it and I volunteered. Even though I don't have a whole lot of experience in it." As Ades explains, she chose to teach computer science because the excitement of her students was palpable: "A lot of the IB [International Baccalaureate] kids are the ones that wanted the AP computer science course and they all came to me and asked if there's any engineering or any robotics [classes]."

For Holly Ades, teaching runs in the family. "My dad's a teacher so he kind of talked me into it," she explains with a quiet confidence that's a credit to her eight years of experience teaching. Despite her years of experience, teaching computer science and coding was as new to her as it was to Riverdale High School. So, Ades decided to take a chance for her students because, she explains, "I'd rather the kids have it" than face the possibility of another year without a computer science class. Ades' goal was to find a program that would allow her high-achieving students to excel at learning to code and keep them engaged, while also supporting her through teaching a new subject and surpassing the goals her administration set for the class.

Challenges



Ades is not alone in confronting the challenge of being a computer science teacher without coding experience. In a study done in partnership with McRel International, CodeCombat found that over 1/3 of teachers had no prior experience with coding (n=123).[1] Being asked to teach something you have never learned is a monumental undertaking, but despite her own apprehension, Ades did it because "all the kids wanted it really bad" and "no one else wanted to do it." Through her own optimism and drive she wanted to try anything possible. "I don't know anything about coding, but it's what my husband does. He's a software engineer. So, I'm like, I'll just learn. I'll figure it out."

Unfortunately, for Ades, her husband only worked with MUMPS,[2] "which has nothing to do with Python or JavaScript," Ades said. "So he couldn't really teach me either."

The start of Ades' journey, to teach her students to excel at coding while learning the language herself, was not easy. A class full of high achieving students made the task more nerve-wracking. Ades started to become frustrated while testing out resources on her own, stating, "I was actually crying at one point because I was so nervous about doing this and I had no idea what I was doing."

Implementation

> **"My training instructor during the summer guided me towards CodeCombat and said it was the best purchase he made for his students. I originally was planning on purchasing the paid version of another program, but was told by multiple instructors that this program would benefit my students the most."**
>
> **Holly Ades, Technology Teacher**

1 https://drive.google.com/open?id=1fKbJFHxk-EAvXwlGrn6MReMyaeQW8EA5
2 https://en.wikipedia.org/wiki/MUMPS

Riverdale principal, Scott Cook, knew that "computer engineering is a growing industry" and that they wanted "to provide [...] students with the advantage of having the knowledge and experience to put them ahead of other candidates." To support the students, Cook knew that he had to start by ensuring that the school and district supported Ades. They started by finding assistance from the district CTE department and other teachers that had helped implement computer science at their schools. The district also provided Ades with AP professional development training at the AP Summer Institute[3] last summer to help her discover the best methods to present the course.

Ades went to the AP Summer Institute fully ready to purchase another program, but her AP instructor told her, "No, get CodeCombat. If you're going to spend the money go purchase that." In fact, other instructors she spoke with had used CodeCombat with their class and also recommended it as being the most beneficial for her students.

When Ades tried CodeCombat with her high-achieving students, she found it was a perfect balance of student engagement and academic rigor. With CodeCombat being a College Board endorsed provider of curriculum and professional development for AP Computer Science Principles, Ades knew she had found her solution:

"I tried 7 different programs that relate to AP CS Principles. CodeCombat is the only program that is designed to assist fully with the coding aspect [of Computer Science]. Many of the other programs are designed to correlate with college platforms, but the students struggle to engage with these programs. CodeCombat keeps the students engaged with a fun platform."

28 Current Students

Students at Rivedale High School have written:

1,548	136,379	59
computer programs	*lines of code*	*games and web projects*

Concepts Learned

- Basic Syntax
- Arguments
- Strings
- While Loops
- Variables
- Algorithms
- If Statements
- Functions
- Parameters
- Place game objects
- Construct mazes
- Basic CSS
- Basic Input Handling
- Basic Game AI
- Basic Web Scripting
- Advanced HTML
- Basic JavaScript
- Basic Event Handling

[3] https://apcentral.collegeboard.org/professional-development/workshops-summer-institutes/about-summer-institutes

Successfully Engaging High-Achieving Students

> **"I have reviewed and tried many different programs. CodeCombat is the best solution for instructing students on how to code. It is a challenging program that is fun and engaging for the students. My students love when I assign a Code Combat level."**
>
> **Holly Ades, Technology Teacher**

Ades teaches a mix of IB and non-IB students in grades 10 through 12 in her AP CSP class and has structured her class around the 4 C's of 21st century skills. Ades starts her class with communication through group instruction, teaching students the levels and "big ideas" prior to them starting their assignments on CodeCombat. After the lesson, she transitions into critical thinking through self-paced learning, giving students guidance when needed, but ensuring "they attempt the level on their own before asking for assistance." She will then supplement self-paced learning with times that she pairs students into groups of three. So far almost all the students are on target working this way. "They actually all work together and that's one thing I push because in the real world they all have to collaborate [when] coding," Ades said, "So they get to pretty much sit down and work together but they're learning and they're trying." Finally, Ades encourages creativity by assigning a monthly level and a final project as a goal they must accomplish. Currently students are working their way through Web Development 2, which is an impressive pace considering they started CodeCombat in the third week of school.[4]

Through this system, Ades feels much more at ease with teaching coding than she was last year: "I'm a lot more comfortable. I feel like there's a lot of things that kids know better than I do but I try and figure it out." Ades is so comfortable she's even helping her husband, "Actually I've been teaching him through this," Ades says. "[He] and my brother-in-law. [They] work for the same company [and] both been using this to learn." Ades' husband has tested all her programs to help give her insight and she said he ranked this as his top

4 http://files.codecombat.com/docs/resources/HighSchoolPacing.pdf

choice. Ades has even had her husband come in and talk to her students about how much he has to collaborate as a software engineer.

Ades credits many of the teacher forward features as tools that empowered her, "When first learning about the program I didn't realize that we could view the live view of what each student is writing for their code and then compare that to the solution," Ades said. "This has helped me tremendously with assisting the students. As an instructor with little to no experience in coding, this guide has surprised me and helped me teach the course to my highest ability."

Ades had the opportunity to welcome incoming freshmen to open house by letting them play CodeCombat saying, "I set this up on a laptop and just kind of let kids play on my account. They were loving it. I had a whole bunch of incoming freshmen they were like, 'This is awesome!' They were all playing it." Helping incoming students become excited about computer science goes a long way in alleviating some of the pressure of teaching students with no coding skills.

Feedback from Principal Cook has also been positive, "Overall, the students have enjoyed the course... and we hope it has left them with the knowledge they will need as they enter college or the workforce."

Ades talks about one student who has found success and is motivated through CodeCombat:

> **"One of my students is already almost done with the next level so she'll only have four levels left to do. Mind you, it's a girl that knew nothing about coding and she was so nervous about taking this class. [Now] she's the one that is the farthest ahead."**

Preparing Students for Real World Success

Principal Scott Cook also recognized the importance of exposing Riverdale students to coding through his own research. "Teaching coding provides students with the experience to develop strategies to create solutions," Principal Cook said. "The statistics show that computer engineering is a growing industry and we want to provide our students with the advantage of having the knowledge and experience to put them ahead of other candidates."

While the administration is waiting for AP scores this summer for insight on how well the students do on the exam, everyone has noticed that the students are highly engaged in learning a skill they can genuinely use in the future. Principal Cook said:

> **CodeCombat has provided a platform that is engaging and beneficial for the students. They have developing coding skills in both Javascript and Python they will be able to use for future job opportunities.**

Scott Cook, Riverdale High School Principal

The students who advocated for AP CSP at Riverdale know what they gain from CodeCombat is worth the cost. "Listen, we're spending money on this," Ades said. She asked the students, "Is it worth it? Do you guys think that we should keep going? There's not one person that said no we shouldn't use this."

Ades held a career fair where students had the opportunity to talk to career professionals and learn how computer science will correlate with actual careers they want to pursue. "Even if you decide you don't want to go in some sort of computer science career it's going to help regardless because everything is going that way. I think they all realize that too," Ades says.

No matter what career they decide, Ades was able to overcome her own nervousness about teaching coding and has given her students a head start by giving them the opportunity to learn real skills they can use in advanced classes or future jobs.

> **CodeCombat helps them progress towards the career choices they may select in the future. Multiple students have come to me saying they want to gain knowledge in web development or game development, because that is the field they plan to enter after college. This program gives them specific guidance in the field they plan to follow.**

Holly Ades, Technology Teacher

Tips for Teachers

Ades recommends that teachers trust their own instincts when it comes to pacing out what they assign. Next year instead of going into some of the harder more advanced Computer Science courses, she plans on starting a new course so her students have the chance to learn both Python **and** JavaScript.

> **The next year I might split it in half. So the first semester work all in Python. The second semester work all in [JavaScript]. I'm saying, pick a language and determine what you want to do and pace it out accordingly."**

CODE COMBAT

Preston High School
Supporting Multiple CS Pathways in One Class

Lisa Bennett
Technology Teacher
Kingwood, WV

Implementation

Grades Taught	9-11
Length of Use	1 year
Students Enrolled this Year	10 AP 40 Intro to CS

10 students in 9th-12th grade AP CSP plus 40 Intro to CS students in one class

Courses Covered

- CompSci 1
- CompSci 2
- CompSci 3

Favorite Features

- User friendly
- Lesson plans
- Clear instructions

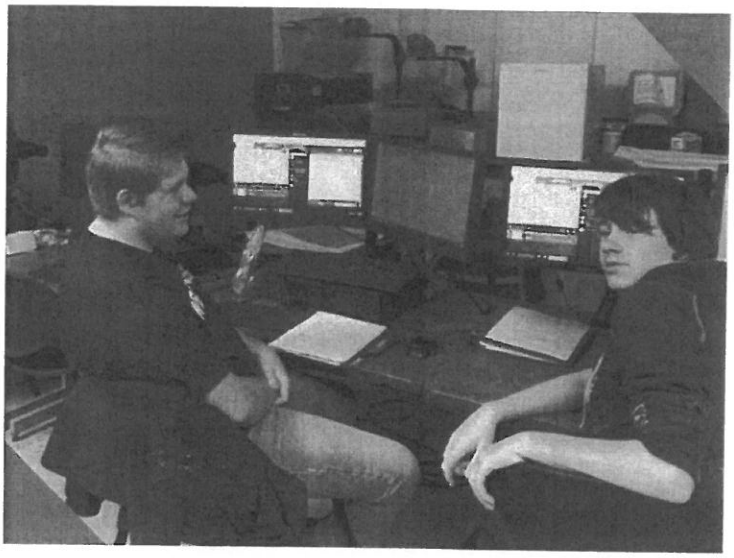
Preston High School happens to be the only high school in all of Preston County, West Virginia serving over 33,000 residents, including over 12,000 families that call the rural community of Kingwood, West Virginia home.[1] Preston High School has a population of 1,185 students and a student-teacher ratio of 14:1, slightly lower than the national average of 16:1.[2] One of the biggest benefits of having fewer students in class is being able to accommodate different learning styles, something that Preston High School Career Technical Education teacher, Mrs. Lisa Bennett, knows plenty about.

As the only educator teaching computer science and coding at the only high school in the district, she has the challenge of finding solutions that work for multiple grades and experience levels, and genuinely preparing her students for careers in West Virginia and beyond. Preston High School Principal, Steve Plum, speaks to the popularity of Bennett's class as "a class that the school has no problem filling. The class is full every semester since its inception."

Early in 2018, Bennett was told she would have to teach AP Computer Science Principles (AP CSP) *and* Introduction to Computer Science students in one class. While West Virginia requires high schools to offer computer science,[3] there was little guidance on how to make sure students and teachers were successful: "The state didn't give a lot of guidelines. They just said they want them to learn to collaborate. They want them to use multiple devices." Along with AP CSP and computer science, Principal Plum had the expectation that Bennett's students learn good digital citizenship.

1 https://www.census.gov/quickfacts/fact/table/prestoncountywestvirginia/HCN010212
2 https://www.publicschoolreview.com/average-student-teacher-ratio-stats/national-data
3 https://code.org/promote/wv

So Bennett started to look for a solution that would help her balance the diverse needs of her future classroom: a mix of Advanced Placement Computer Science students, Introduction to Computer Science students, and special education students. Her goal was to find a self-paced solution that would immediately engage students within the constraints of a traditional 45-minute learning block and cover all the necessary course requirements designated by her state and administration.



Challenges

Many of Bennett's students are low income and do not have computers at home. Since students also have no access to tablets at school, the state allows the use of a personal device for authorized use. Unfortunately, the draw of playing a video game like Fortnight or chatting on social media on their cell phones can be too enticing for some students and sometimes leads to disciplinary issues and disruptions in class.

The hardest challenge for Bennett is having to teach students entering her class with almost no exposure to coding and trying to help them through their frustration. Bennett recalls how that sense of exasperation was echoed by many of her students: "They would be like, 'I don't get it. I just don't understand computers.' "

Bennett is adept at the flexibility needed to teach a mix of grade levels and abilities. With a class of 9th through 12th graders, she'll sometimes have special education students or students that have been held back numerous times. This year, she has a total of 42 students learning Introduction to Computer Science across two classes and five students that are learning AP CSP at the same time.

While all her students have a rubric they must follow, her AP CSP students have the most stringent standards since requirements are dictated by the College Board. There's also the added pressure she and her AP students feel to do well since it's such a big investment of resources, money and time for both.

Implementation

> **"This school district has limited funding, so choosing CodeCombat for AP CSP was a well thought out decision due to its curriculum and the interest the students have in using the program."**
>
> **Steve Plum, Preston High School Principal**

Before purchasing CodeCombat, Bennett tested various coding products. "I was looking for something that would engage my students without me having to force them to learn. And so I looked at a few programs." While walking around and asking the students how they were enjoying another coding product, one female student who was good at coding said to her, "Oh it's okay but you should try CodeCombat. My teacher last June let us do CodeCombat. We really liked it."

The other coding product did not hold her students' interest and Bennett herself was hoping to find a better alternative to the coding product she was testing in class, saying "I personally didn't really like it that much." So her student's recommendation was Bennett's initial big push to try out CodeCombat.

Bennett's class tested out CodeCombat's Introduction to Computer Science for two weeks just before the holidays in 2017. They started in Python, learning basic programming concepts such as syntax, loops, variables, and algorithms.

63 Total Students
50 Current Students

Students at Preston High School have written:

1,314 *computer programs*

13,669 *lines of code*

Concepts Learned

- Basic Syntax
- Arguments
- Strings
- While Loops
- Variables
- Algorithms
- Place game objects
- Construct mazes
- Create a playable, sharable game project
- If Statements
- Functions
- Parameters
- Advanced Strings
- Arithmetic
- Input Handling
- Boolean Logic
- Arrays
- Break Statements
- Continue Statements

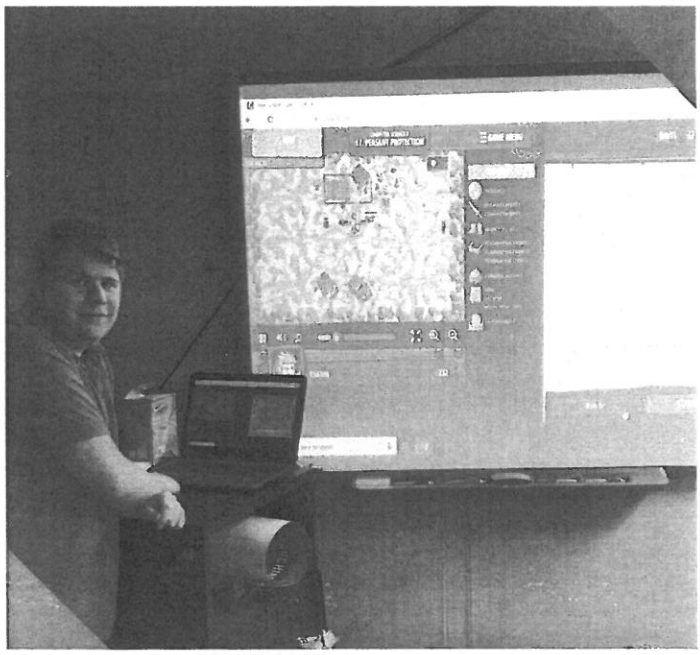
> **...everyone was engaged and really interested. It wasn't like I was forcing them. A lot of kids said by doing it, it helped them know why they were writing certain code.**
>
> **Lisa Bennett, Technology Teacher**

With the thought of her combined AP CSP and Intro to Computer Science class looming on her mind, Bennett knew she had already found a solution she wanted to purchase for her class.

Fortunately, another middle school teacher in the district had already received CodeCombat funding approval from the school board, so Bennett just needed to wait for the funds to be released. By the end of September, her class was ready with a full curriculum of CodeCombat.

Creating Opportunities for Deeper Learning

Through CodeCombat, Bennett's first challenge was immediately solved. Students are not only motivated to focus on their work, but they're also ready to start working at the start of class. "I didn't expect the students to get on the program every day without prompting." She also no longer has to compete with cell phones for their attention. "I don't have to say, 'OK. Come on. Get off the game and get on to your work.' I don't have to do that with them. They just come right in and get on there."



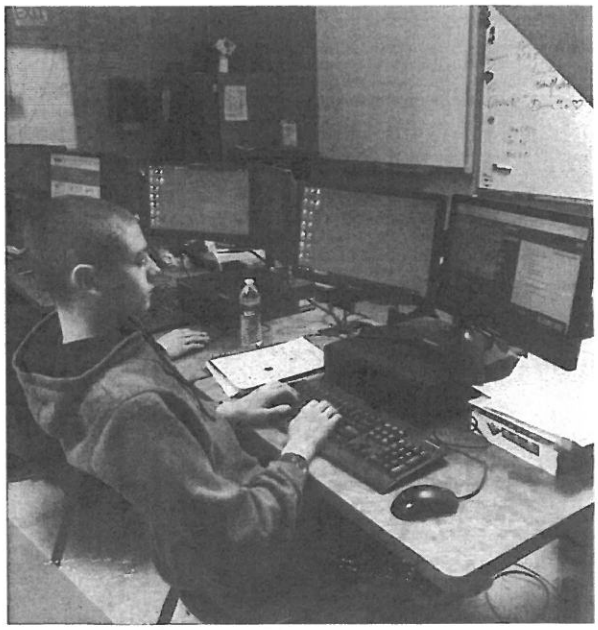
CodeCombat's game, with it's clear instructions and varied content, is not only fun, but also helps to reinforce the lessons students are learning. "The students use what they learn." Students are engaged in coding because they are playing a real game. Not only that, but they begin to understand how the games (that previously distracted them) actually work and how they can create a game themselves. Bennett also mentions that students now easily sit through instructional videos because "They want to learn how to do the next step," and love that they can pick up their work within the program where they left off right when class starts.

Bennett has even created opportunities for students to enhance their communications and build digital citizenship skills by teaching them to use the CodeCombat forums: "I love the fact that they use it. They ask questions of other kids across the country. That's really important." Bennett has also taught them to use the website to report any issues they encounter so that they no longer have to tell her and can take the initiative to report it themselves.

The structure of the CodeCombat curriculum allows Bennett to cover more topics in a shorter amount of time. Bennett acknowledges that the time constraint can be a challenge for a teacher that wants to offer deeper or more personalized learning, but with CodeCombat things have been much easier.

> **"With CodeCombat, 45 minutes is enough to get them engaged and get them going... It's so active and interactive that they get a big bunch of it for 45 minutes and then they can come back and do it again 45 minutes later."**
>
> **Lisa Bennett, Technology Teacher**

Bennett uses the CodeCombat lesson plans to create her own worksheets and provides it to the students as an overall summary of what they've learned. She also uses CodeCombat's assessments and a student's overall completion of the levels as part of her own rubric in order to motivate her students to work their hardest and meet classroom as well as their own expectations.



Fascination Over Frustration

The frustration inexperienced students once started with has now evolved into a rewarding challenge for them. "I don't hear students with little experience getting upset and not trying." Bennett adds, "I enjoy hearing that this is hard. Yet, they continue to dive in and figure out the process." When students communicate that a level is hard, her advice to them is an encouraging push to keep trying: "I say, 'Just stick with it.' Bennett adds, "I tell them when you first start out it's gonna be different, kind of like learning a foreign language." Bennett's encouragement and her students' ability to code through trial and error is working. "Now they're not afraid of making mistakes."

Tips for Teachers

Bennett's recommendation to teachers is to engage in student-centered learning in coding, involving students in the creation of learning goals and the discussion about which tools to use in class to support those goals.

> **"[Because] I asked them if they would be interested in using this program, the students felt like they were a part of their learning."**

For some of Bennett's students, CodeCombat has also helped funnel disruptive behavior into positive temperamental changes, transforming them into empowered learners. Bennett recalls one special education student's exclamation of joy: " 'Now I understand why I'm doing what I'm doing.' "

While Bennett will pull students together at the beginning of class to reinforce concepts or introduce a new lesson, the class is largely self-paced. A self-paced class allows Bennett to avoid the boredom induced disruptions caused by students that have to wait for peers to catch up. This way, no one is left behind and it allows AP and advanced students to be individually challenged.

Bennett is able to track a student's progress on the teacher dashboard. If she notes that a student seems to be having difficulty independently solving a problem, she'll engage with AP students to see how they think they may be able to help, teaching both collaboration and critical-thinking. "I'll say, 'Do you want to walk her through this? [Do] you think there's a snag somewhere?' "

21st Century Skills for a Brighter Future

CodeCombat and Bennett's own efforts have helped transform her class into a critical-thinking space where AP students and Intro to Computer Science students of all skill levels can work independently or collaborate, communicate problems, learn from all the tools at their disposal, learn from mistakes, and channel their anxiety and stress into productive personal challenges. Principal Plum has noticed the improvements in the class, remarking that "During my walk-throughs where I see personally what the students are working on in their classes, this coding class is engaged and focus[ed] on the daily tasks."

Bennett does not expect AP test results until the end of the year, but can already see the tangible changes that will make them better equipped for college or future careers, which is especially relevant in Preston County where there is an 84% high school graduation rate, but only 15% of students obtain a bachelor's degree or higher. "We're trying to get them to see the value of coding and

that there's jobs available in West Virginia where they can actually use it, for them to see the importance of learning it. They're used to computers being a game and not for actual work, and that's what we're trying to instill in them."

Students will encounter different personalities and experience levels and need to learn to work with all of them in future careers. Bennett appreciates how CodeCombat made it easier for students to work together.

> **"I really liked their collaboration and that they're learning to work together and ask each other questions."**
>
> **Lisa Bennett, Technology Teacher**

Bennet adds that students are "learning how to figure things out and not be so teacher dependent."

AP students, Intro to Computer Science students, and special education students all in one class was a challenging situation that Bennett turned into a deeper learning opportunity that will continue to reward students no matter where they decide to take their skills. Next year, Bennett will have a full class of 25 AP Computer Science students and she'll be ready for whatever new challenges come her way.

Attachment 1

PRICING OPTIONS - Attachment C

Provide pricing for the scenario below based off pricing

being offered:

*NOTE: A pricing document has been attached with the iRFP for clarification on pricing for all resources that CodeCombat offers and would be possible for HCPS to purchase.

Scenario	**Price**
Provide pricing for an annual subscription for one site licenses for a high school for 149 Business students	$5,215
Virtual training for 25 teachers (minimum one hour)	$1,000 per 1 hour session

Provide pricing as it relates to the proposed solution

*NOTE: A pricing document has been attached with the iRFP for clarification on pricing for all resources that CodeCombat offers and would be possible for HCPS to purchase.

	Price
Price per Student (provide details if tiered pricing is offered)	See Attached Pricing Document
Price per Teacher	NA, CodeCombat does not charge per teacher for licenses
Price per Classroom	NA, CodeCombat does not charge per classroom for licenses
Price per Site	$6,000 per site
Price for District License 6-12	NA, CodeCombat does not do their license structure this way

Virtual training to introduce teachers to the platform, inform how to find user instructor materials and answer questions.	Implementation Training. See attached pricing document
Additional Professional Development models	$2,000 per teacher. Reference the Professional Development Flyer and TOC for more information
Printed materials - provide list of pricing for each product offered	NA
Consumables - provide list of pricing for each product offered	NA

CodeCombat's 2021 Standard Tiered Pricing

# of Users	CodeCombat and Ozaria
Up to 99 Students	$50/student
100 to 249 Students	$35/student
250 to 499 Students	$27/student
500 to 899 Students	$22/student
900 to 1,499 Students	$19/student
1,500 to 2,399 Students	$16/student
2,400+ Students	$14/student

Multi-year Discounts (Not available for pilots)
*TCV = Total Contract Value

Paid Upfront - (2 years)	15% off TCV
Paid Upfront - (3 years)	20% off TCV
Paid Upfront - (4 years)	25% off TCV
Paid Upfront - (5 years)	30% off TCV

2021 Standard Pricing - Professional Development

Professional Development	Cost Per Teacher
Standard Pricing	$2,000
Early Bird Pricing - before its release in August	$1,500

2021 Standard Pricing - Implementation Training

School-Wide Training (up to 10 attendees)	$500
District-Wide Training - includes 1 admin session and 1 teacher session 2 teacher sessions (up to 25 attendees)	$1,000

2021 Standard Pricing - AI League (Esports)

School Customized Tournament Option 1	$1,000 per school per year
School Customized Tournament Option 2	$500 per school per season
District Customized Tournament	Customized pricing for each district