

**Columbus City Schools  
Office of Internal Audit**



**COLUMBUS  
CITY SCHOOLS**

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**Virtual Credit Advancement Program (VCAP)**

**Audit Report**

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**Report Date: March 26, 2019**

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**Executive Summary**

The Columbus City Schools (District) Office of Internal Audit (OIA) has recently completed a general audit of various sub-processes within the District’s Virtual Credit Advancement Program (VCAP). Our audit focused on evaluating predetermined objectives selected by OIA. This general audit consisted of the review and testing of these objectives relevant to VCAP. This audit involved District personnel charged with establishing and updating VCAP procedures, and school personnel charged with overseeing VCAP.

Based on the results of our work during this audit, we found areas where improvements could be made to strengthen the internal control environment and enhancements could be made to current procedures and processes to increase the efficiency of VCAP.

During the course of our audit, we made District management charged with the responsibility of VCAP and senior management aware of our issues, comments and recommendations for improvement. Good discussion took place regarding the recommendations. OIA appreciates the cooperation extended to us and the assistance of all staff we came into contact with as we performed our audit.

The following are OIA issues noted during the review:

**Risk Ratings, defined:**

- 1 – High/unacceptable risk requiring immediate corrective action;**
- 2 – Moderate/undesirable risk requiring future corrective action;**
- 3 – Low/minor risk that management should assess for potential corrective action.**

Issues	Risk Rating		
	1	2	3
<b>Objective 1: To determine written business objectives/goals, metrics and risk analysis exist for the VCAP process.</b>	No comments		
<b>Objective 2: To determine appropriate governance exists and is communicated.</b>	No comments		
<b>Objective 3: To determine sufficient internal controls are in place and operating as management intends.</b>	No comments		

Issues	Risk Rating		
	1	2	3
<b>Issue No. 1</b> – The Edmentum vendor does not have appropriate password protocols or sufficient controls to ensure data integrity.	X		
<b>Issue No. 2</b> – VCAP testing during weekend and/or between the hours of 9pm and 6am lacked proper support documentation.	X		
<b>Objective 4: To determine appropriate monitoring function is in place to enhance accountability and identify any problem areas in a timely manner.</b>			
<b>Issue No. 3</b> – District VCAP management is not performing the necessary monitoring functions as they relate to employee access to Edmentum and test completion outside of expected days/hours.		X	

**Audit Objectives**

The objectives of the audit were to determine:

- Written business objectives/goals, metrics and risk analysis exists for the VCAP process;
- Appropriate governance exists and is communicated;
- Sufficient internal controls are in place and operating as management intends; and
- Appropriate monitoring function is in place to enhance accountability and identify problem areas in a timely manner.

Sub-processes reviewed during this audit were:

- VCAP Policies and Procedures;
- VCAP System Access (Roles, Password Criteria, etc.);
- VCAP Training (Coordinator, etc.);
- VCAP Program Approvals (Parent, Building Administrator, Special Education and VCAP Coordinator);
- VCAP Testing (Pre, Post and End of Course);
- VCAP Grading (Report Card, Transcripts, etc.); and
- VCAP Management Oversight (School, VCAP Office, Reasonableness, etc.).

**Audit Scope**

OIA established the scope of the audit to include a review of basic operational aspects of VCAP as they relate to the above sub-processes and evaluation of the internal control

environments as they relate to the stated objectives. The period of time for the audit included all activity relating to the VCAP function that occurred from July 1, 2017, through June 30, 2018, with the exception of password review which was as of December 2018 due to the point in time password reports available in Edmentum.

### **Methodologies**

To accomplish our stated objectives, OIA performed the following tasks as they related to those objectives:

- Obtained and reviewed relevant Columbus City Schools' (CCS) Board of Education policies;
- Obtained and reviewed relevant District procedures;
- Interviewed various VCAP staff, administration, and senior management involved with VCAP throughout the organization;
- Observation and documentation of key processes; and
- Review of management reports, support documentation, and other relevant information.

### **Background**

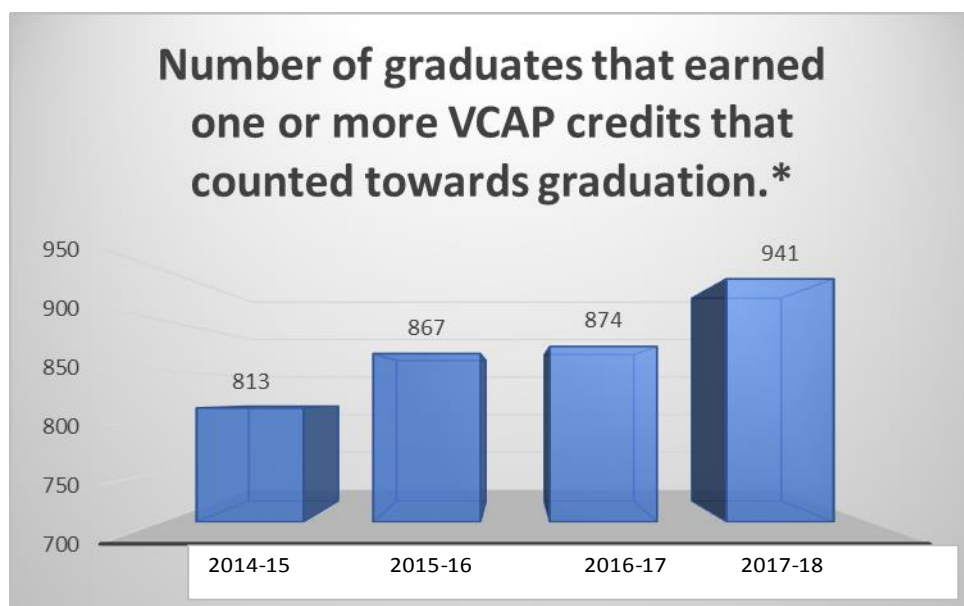
The VCAP enables students to complete their high school diploma requirements online, choosing from a full complement of courses, including literature, history, science, mathematics, physical education, and health. Whether students need to make up missed credits, repeat courses, take course in advance and/or balance school with other responsibilities, VCAP is one of the alternatives provided by the District. VCAP has expanded high school course offerings taught by certificated teachers. These courses are available to students, grades 9-12, who wish to earn credit toward graduation by an alternative means. Eligible students must be enrolled in the Columbus City Schools District and be 14-21 years of age; but have not earned enough credits to graduate from high school.

The District's VCAP serves three groups of students:

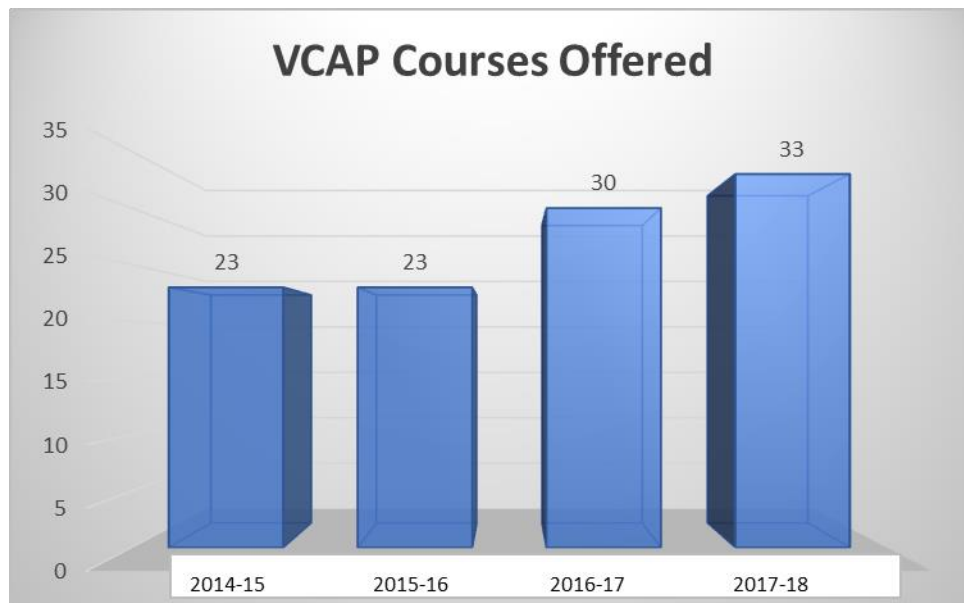
- Full-time students utilize VCAP outside of the traditional schoolhouse hours at the Columbus Downtown High School. Full-time VCAP students must attend the Columbus Downtown High School 15 hours per week as noted by "positive attendance" entries in the student information system, Infinite Campus.
- Part-time students utilize VCAP both at the Columbus Downtown High School and are enrolled in other programs. Examples of this are: Career Center, DeVry, and CSCC.

- School-Based Students utilize VCAP at their home school working with VCAP Leads, VCAP Licensed Teachers, and/or VCAP District Content Teachers of Record during the day and/or after school.

Edmentum is the vendor utilized by the District for the online learning platform. The company was formed in the early 1960s and, under the name PLATO, created the first authentic computer-assisted learning system designed for widespread use. The PLATO system is now known as Edmentum Courseware (Edmentum) and is designed to be interactive while allowing students to work independently and at their own pace to learn the course material.



**\*35.38% of graduates in 2017-18 earned one or more VCAP courses that counted towards graduation.**



**Results of the Compliance Audit of the Virtual Credit Advancement Program (VCAP) – Issues and Recommendations:**

**Issue No. 1 – The Edmentum vendor does not have appropriate password protocols or sufficient controls to ensure data integrity.**

The Division of Alternative Programming within the Office of Accountability and Other Support Services are utilizing a vendor who does not have appropriate password protocols or sufficient controls in place to ensure data integrity. During our review of the Edmentum system, we found the following:

**Password Protocols**

Passwords are a critical component of information security and data integrity. Passwords serve to protect user accounts; however, a poorly constructed password may result in the compromise of individual systems, data, or network.

Neither Edmentum or CCS VCAP Office, have a password standard established for Edmentum that requires a specific password strength, periodic change of password after a specific time period, and the functionality for two-factor authentication.

OIA reviewed the user access reports, with the assistance of the CCS Edmentum representative, and noted 30% (41 of 138) of the instructors were using the default password.

### **Data Integrity**

The Edmentum system does not have a systematic way to ensure all course tests are locked after the student leaves a session, if the teacher/instructor signs out of Edmentum or if there is a specific time period of inactivity by the student within the course test, or as an end-of-day process.

Based on the design of the VCAP courses in the Edmentum software, teachers from one school building could access and make changes to student records from a different school building. This includes, but not limited to locking a course test, unlocking a course test, changing a student's test or assignment score, and making changes to the student's gradebook. Additionally, individuals who are overseeing a student taking a test could not be restricted from having the capability to manually make changes to the student's final score. This creates a segregation of duties concern with the current system set-up and Edmentum user-role system limitations.

The Edmentum system software does not have a "read only" access role in order to allow building administration and other CCS Management to monitor activity and validate if controls are working as intended without having the capability to make changes to the underlying data.

### **Recommendations**

1. Management should establish a password standard which includes, but is not limited to:
  - password construction (minimum length of password, mix of alphanumeric and special characters);
  - password composition (not contain well known or publicly posted information such as name, school name, class, or common words such as password or welcome);
  - password history (prohibiting from re-using the last 5 previously used passwords); and
  - requirement for periodic password change (every 60, 90, or 120 days).
2. Management should work with Edmentum for a systematic solution and/or establish a process to ensure tests are locked after a period of inactivity and/or when the VCAP Licensed Teacher signs out of the system. This will minimize the opportunity for a student to complete a test unsupervised as the District requires a student to take a pretest, posttest, or end of course test in the presence of the VCAP Licensed Teacher or the VCAP District Content Teacher of Record.
3. Management should restructure the system access roles in order to ensure no one-person can unlock/lock a test, change assignment and/or test grade results, and/or modify the Edmentum gradebook for all students within the District. Additionally, the roles should be reviewed for reasonableness based on the individual's job functions to ensure proper segregation of duties exist.



4. Management should work with Edmentum to create a read only access role for the Edmentum platforms in order to monitor compliance with established procedures while ensuring there are no changes inadvertently made to the underlying data.

**Management Response:** Recommendation #1 Management Response: A plan of action was developed on December 12, 2018 that was fully implemented on January 28, 2019. This change updated all VCAP Educator Accounts to a unique password, mirroring the criteria for Columbus City Schools' password standards. All new passwords are scheduled to be monitored and changed twice a year.

Recommendation #2 Management Response: On December 7, 2018 and again on January 30, 2019, requests were made to Edmentum to add a time out feature that will automatically re-lock tests after a period of inactivity and when the VCAP student signs out of the system. On February 25, 2019, the Office of Testing and Program Evaluation Services was informed that Edmentum will provide automatic lock out features including the following:

- When a student saves and closes a test, it locks.
- If the student logs out of Edmentum, it locks.
- After one hour of inactivity, it locks.
- If a teacher logs the student out, it locks.

These new enhanced features will be available starting with the 2019-2020 school year. (Relevant documents were submitted to OIA)

Recommendation #3 Management Response: On January 11, 2019 a restructuring of the system access roles was completed to ensure no one-person can unlock/lock a test, change assignment, and/or test grade results, and/or modify the Edmentum gradebook for all students within the District except the VCAP Account Administrators. Account Administrators uses are monitored by the VCAP Supervisor. The new role segregation implementation assigns students into individual school specific course sections. Teachers are now appropriately assigned only to their school's sections.

Recommendation #4 Management Response: On December 7, 2018 and again on January 30, 2019, requests were made to Edmentum to create a "Read Only" account level to accommodate administrators and support personnel working across various site sections. This new feature will be available, according to Edmentum, by November of 2019. (Relevant documents were submitted to OIA)

**Process Owner:** Dr. Danielle Bomar, VCAP Supervisor

**Implementation Date:** November of 2019

**Issue No. 2 – VCAP testing during weekend and/or between the hours of 9pm and 6am lacked proper support documentation.**

CCS Guidelines for VCAP are documented in the VCAP Handbook. This Handbook indicates “all pretest, unit post-tests, and end of course exams must be taken in the presence of a VCAP Licensed Teacher [formerly referred to as HQT VCAP Teacher]”. The Handbook goes on to explain that “student attendance [for after school and full-time VCAP] must be taken in Infinite Campus utilizing *Positive Attendance*”.

In order to determine if evidence existed that the students were appropriately supervised during the pretest, unit post-tests, and end of course exams, OIA selected five of the thirty-one VCAP courses listed in the VCAP Handbook and pulled the Class Usage Summary Report to identify students who took the class tests noted above on a weekend and/or between the hours of 9pm and 6am. OIA then requested, through the VCAP office, evidence from the school building that the student was properly supervised during the test.

For 100% (81 of 81) of the student/course/test combinations that fit the above circumstances, there was no evidence of positive attendance entries in Infinite Campus or VCAP sign-in sheets at the school buildings that supported the student was properly supervised by a VCAP Licensed Teacher or VCAP District Content Teacher of Record as required by the VCAP Handbook.

**Recommendations**

5. Management should ensure there is documented evidence the students are properly supervised when taking pretests, post-tests, or end of course test, especially when taking a test outside the normal school days/hours for the VCAP classes. This will help ensure the student’s test results are based on their knowledge of the subject and not the chance they are performing an unauthorized open-book exam.
6. Management should establish a procedure and communicate the expectations for documentation of appropriate supervision outside normal VCAP (school based, full-time, or part-time) established days/hours in order to ensure students are properly supervised for any tests.

**Management Response:** Recommendation #5 Management Response: On October 29, 2018 the VCAP Office re-communicated via email (Relevant documents were submitted to OIA) to all VCAP stakeholders the expectation that there is documented evidence for students being properly supervised while taking pretests, post-tests, or end of course tests. Universal Sign-In and Sign-Out logs were created (Relevant documents were submitted to OIA) and stored at each individual high school and are routinely monitored by the District’s Student Data Compliance Specialists (SDCS) (Relevant documents were submitted to OIA); this ensures each student’s VCAP work is authenticated. The SDCS assigned to each of the CCS High Schools will systematically cross-check the accuracy in Infinite Campus (IC) with the stored, new VCAP Sign In/Sign Out Log for Positive Attendance Entry with the Attendance Office at each high

school. (Relevant documents were submitted to OIA) *VCAP Sign In/Sign Out Log for Positive Attendance Entry.*

Recommendation #6 Management Response: On November 21, 2018 the VCAP office re-communicated via an email (see Appendix D) entitled *NEW VCAP Programmatic Mandate*, and through Confluence postings, the expectations for documentation of appropriate supervision outside normal VCAP (school based, full-time, or part-time). These communications further established hours to ensure students are properly supervised for tests. On January 28, 2019 an additional email (Relevant documents were submitted to OIA) entitled *Items Needed for VCAP Bootcamps* was sent to all principals reminding them that ALL staff who are facilitating VCAP must be thoroughly trained and signed off on as “Trained” – meaning staff attended the VCAP Columbus City Schools & Edmentum Courseware Training and successfully passed the PublicSchoolWORKS VCAP Knowledge Assessment. Management communicated these expectations for documentation of appropriate supervision (of school based, full-time, or part-time students) when outside of normal VCAP established hours to ensure students are properly supervised for any tests by way of the following:

- Communicated via emails to all principals on November 21, 2018 & January 28, 2019
- Posted on Confluence with an email link reminder
- Added to the CCS-CAP (Columbus Administrative Portal) on the February 11, 2019 (see Appendix F) weekly Administrators update blog that was emailed to All District Administrators on February 6, 2019
- Added to the VCAP Handbook and Annual VCAP Training Materials, *AND*
- Added to the February edition of THE VCAP RECAP (The VCAP’s newsletter reinforcing important VCAP information, including training reminders and new VCAP programmatic changes).

**Process Owner:** Dr. Danielle Bomar, VCAP Supervisor

**Implementation Date:** See above

**Issue No. 3 – District VCAP management is not performing the necessary monitoring functions as they relate to employee access to Edmentum and test completion outside of expected days/hours.**

CCS VCAP management does not perform a periodic system access review of the Edmentum system to validate all active users have appropriate access based on their CCS role and that all users who have left the District or transitioned to a different role within CCS have their access either disabled or changed to correlate with their current CCS role.

CCS VCAP management does not provide sufficient oversight of tests completed outside of normal days/hours to review for reasonableness and assurance the student was properly supervised during the test administration. Additionally, Edmentum does not have a systematic process to identify tests that remained unlocked after a

predetermined time of inactivity or after the VCAP Licensed Teacher or VCAP District Content Teacher of Record signed out of the Edmentum system.

### **Recommendations**

7. Management should establish a periodic access review for Edmentum users to ensure the user access is appropriate for the job performed and that individuals who have left the District, or role, no longer have access to Edmentum and/or the old school records if they changed school buildings. Management should maintain documentation of the review and changes made based on the results of the periodic review.
8. Management should enhance the current monitoring process to include review of tests taken outside standard timeframes and tests completed in an unreasonable time for content to name a few. Additionally, management should work with Edmentum to systematically identify tests that were erroneously unlocked or remained unlocked outside established parameters.

**Management Response:** Recommendation #7 Management Response: The integration of using Clever is scheduled to be completed by the beginning of the 2019-2020 school year. This will allow student information to be shared with Edmentum via a periodic data pull from Infinite Campus. The feed is managed with software by Clever, which allows the District to set parameters on which data is sent and under what conditions. For example, when a student is no longer enrolled in Infinite Campus, they would no longer be a part of the integrated data pull via Clever. Similarly, staff members no longer employed by the District would also be excluded from the data feed.

Recommendation #8 Management Response: The Edmentum Project Manager for CCS shall conduct a periodic audit of pre, post, and final exams to determine compliance with the District requirement that tests be taken during supervised time. The audit shall also include a check of whether time on test appears to comply with anticipated norms for test completion. The periodic audit shall be done quarterly. The selection of the students shall be done in accordance with recommended auditing selection methodology.

**Process Owner:** Dr. Danielle Bomar, VCAP Supervisor

**Implementation Date:** See above