

# Integrating Office 365 Into Your Curriculum: A Backward Design Professional Learning Course

Katharine McClelland

Instructional Technology and Leadership

Duquesne University

Pittsburgh, PA USA

mccllellandk@duq.edu

**Abstract**—To meet the learning needs of teachers and students, a professional learning course was developed on newly introduced instructional technology, Microsoft Office 365 Suite. This poster presentation shares the development, implementation, and impact of the professional learning course.

**Keywords**—professional learning; backward design.

## I. INTRODUCTION

New for 2015-2016 school year, the West Allegheny School District introduced the Microsoft Office 365 Suite of online tools to both staff and students. Over the summer months, the school's technology specialists dedicated countless hours to switching over each staff member and creating student accounts within the new Office 365 platform. After making the switch, administration recognized a need to provide training on how to best use this instructional technology within the classroom.

## II. DESIGN OF COURSE

To meet this need, a professional learning course called *Integrating Office 365 Into Your Curriculum* was developed using the backward design model (see Appendix B for course layout). The course was designed to introduce the learner to each of the tools available through the Office 365 Suite including: Email, Tasks, People, Calendar, OneNote, Class Notebook, OneDrive, Online Word, Excel, & PowerPoint, Video, Sway, and Yammer. All learning objectives and instructional methodologies included as part of the course were aligned to the International Society for Technology Education (ISTE) Standards for Teachers and Danielson's Framework for Teaching. Throughout the course, teachers were required to align their work to the PA or national standards for their content area.

Each session was designed to include not only learning how to use the focus feature, but also best practices for integrating the technology into the curriculum which were discussed in detail during the sessions. Throughout the course the learners were expected to collaborate with

colleagues, to increase their exposure and the quality of their lesson designs. As the course progressed, the learning activities were designed to challenge the learner to achieve higher by developing increasingly productive lessons that showed growth in student learning.

The learning was designed to be assessed through formal and informal observations by both administration and peers as well as self-reflection and student feedback. It was the ultimate goal of the course that the learner developed a firm understanding of each of the tools available and how integrating the instructional technologies within their curriculum impacted student learning.

## III. CONCLUSION

This poster presentation will describe the development and implementation of the course, the learning outcomes and activities for each session, and share the testimonials of the teachers as a result of the implementation of the instructional technologies. Additionally, the presenter will provide evidence to support the design of the course linked to research-based best practices including Gagne's Nine Levels of Learning, the backward design model, and the SAMR model. The appendices included at the end of this paper provide a detailed layout of the backward design process followed for the entire course (Appendix A) and each session (Appendix B).

## REFERENCES

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APPENDIX A: PROFESSIONAL LEARNING COURSE PLAN

<b>Stage 1</b>
<b>If the desired result is for the learner to...</b>
<p><i>Understand...</i> How to use office 365 tools within his/her content area to improve the learning of his/her students.</p> <p><i>And thoughtfully consider the question...</i> How can integrating technology into the curriculum enhance student learning and positively impact achievement?</p> <p><i>While considering distinguished practice in the Framework for Teaching (Act 82), particularly the listed areas:</i></p> <ol style="list-style-type: none"> <li>1a. Demonstrating Knowledge of Content and Pedagogy</li> <li>1d. Demonstrating Knowledge of Resources</li> <li>1e. Designing Coherent Instruction</li> <li>2c. Managing Classroom Procedure</li> <li>2e. Organizing Physical Space</li> <li>3c. Engaging Students in Learning</li> <li>3d. Using Assessment in Instruction</li> <li>4a. Reflecting on Teaching</li> <li>4b. Maintaining Accurate Records</li> <li>4e. Growing and Developing Professionally</li> </ol> <p><i>And showing mastery in the following ISTE Standards for Teachers:</i></p> <ol style="list-style-type: none"> <li>1. Facilitate and inspire student learning and creativity</li> <li>2. Design and develop digital age learning experiences and assessments</li> <li>3. Model digital age work and learning</li> <li>4. Promote and model digital citizenship and responsibility</li> <li>5. Engage in professional growth and leadership</li> </ol> <p><i>As well as the PA Core Standards and/or national standards that correspond with his/her content area.</i></p>

<b>Stage 2</b>
<b>Then evidence is needed of the learner’s ability to...</b>
<p>Use each of the office 365 tools in his/her teaching practice within his/her content area. Reflect on his/her teaching practice and identify areas of strength as well as areas for growth.</p> <p><i>Then, the tasks to be assessed need to include...</i> Implementation of office 365 tools within instructional practices. Impact of instructional technology on student learning. Reflection of teaching practice and student learning.</p>
<b>Stage 3</b>
<b>Then, the learning activities need to help the learner...</b>
<p>Understand how to use and integrate each of the office 365 tools in his/her instructional practice. Design quality lessons using one or more of the office tools. Work collaboratively with colleagues to develop lessons that integrate instructional technology. Implement designed lessons then gather student feedback and students’ reflection of learning as a result of the lesson. Reflect on implemented lessons and student learning to improve teaching practice.</p>

APPENDIX B: PROFESSIONAL LEARNING LESSON PLANS

<b>Session 1—Introduction of Office 365 Suite with a Focus on Email, Tasks, People, &amp; Calendar</b>	
<b>Stage 1—Desired Results</b>	
<p><u>Established Goals:</u> The learner will be able to use the email, tasks, people, and calendar features of office 365 for professional responsibilities. The learner will be able to design a lesson focusing on students use of email, tasks, people, and calendar stressing the importance of digital citizenship. The learner will be able to teach the lesson he/she designed focusing on students use of email, tasks, people, and calendar and appropriately assess the learning of his/her students.</p>	
<p><u>Understandings:</u> The importance of digital citizenship How to use email, tasks, people, and calendar features of Office 365 with students</p>	<p><u>Essential Questions:</u> How can integrating technology into the curriculum enhance student learning and positively impact achievement?</p>
<p><u>The learner will know...</u> How to use email, tasks, people, and calendar features.</p>	<p><u>The learner will be able to...</u> Design a lesson integrating student email, tasks, people, and calendar features of Office 365 focusing on</p>

	<p>digital citizenship. Teach the lesson he/she developed to his/her students.</p>
<b>Stage 2—Assessment Evidence</b>	
<p><u>Performance Tasks:</u> Complete the tutorial on how to use email, tasks, people, and calendar features of Office 365. In content area teams, collaboratively design a lesson introducing student email, tasks, people, and calendar features to the students, stressing the importance of digital citizenship. In content area teams, design a lesson aligned to the course curriculum that integrates the use one or more of the newly taught features of Office 365. In content area teams, collaboratively design an assessment on digital citizenship and recently taught features of Office 365.</p>	<p><u>Other Evidence:</u> Observation (by administration and/or peer) Teacher reflection Student’s reflection of learning Student’s feedback of lesson Evaluation of student work</p>
<p><u>Methods of Assessment:</u> Observation throughout professional learning session</p>	

Discussion during professional learning session Completion of session feedback form Observation of lesson implementation Review of teacher reflection, student’s reflection of learning, and student’s feedback of lesson Evaluation of student work	
<b>Stage 3—Learning Plan</b>	
<u>Learning Activities:</u> The learners will be divided into content area teams for the entire session. For each feature—email, tasks, people, and calendar—the following will occur: <ul style="list-style-type: none"> <li>• The learner will complete the individual interactive tutorial.</li> <li>• The learner will engage in a small group discussion around the feature, recording highlights of the group’s discussion and ideas for integration on chart paper.</li> <li>• Each small group will share with the large group their thoughts and ideas for integration.</li> </ul> The groups will collaboratively design a lesson introducing students to digital citizenship and the office tools—email, tasks, people, and calendar. The groups will collaborative design a lesson aligned to the course curriculum that integrates the use one or more of the newly taught technology. The groups will collaborative design an assessment on digital citizenship and recently taught technology.	
<u>Activities to be Completed Outside of Scheduled Sessions:</u> Reflect on lesson implementation and student learning. Gather feedback from students on their interpretation of their learning.	
<b>Session 2—Using OneNote and Class Notebook</b>	
<b>Stage 1—Desired Results</b>	
<u>Established Goals:</u> The learner will be able to use OneNote. The learner will be able to design a Class Notebook for each course he/she teaches. The learner will be able to design a lesson that introduces and integrates the Class Notebook into his/her course curriculum.	
<u>Understandings:</u> The importance of digital citizenship How to use OneNote How to create a Class Notebook The features of the Class Notebook and how to integrate them into the curriculum	<u>Essential Questions:</u> How can integrating technology into the curriculum enhance student learning and positively impact achievement?
<u>The learner will know...</u> How to use OneNote How to create a Class Notebook for each course he/she teaches. How to effectively use Class Notebook to benefit the learning of his/her students.	<u>The learner will be able to...</u> Create a Class Notebook for each course he/she teaches. Design a lesson that introduces and integrates Class Notebook into his/her course curriculum. Teach the lesson he/she developed to his/her students.
<b>Stage 2—Assessment Evidence</b>	
<u>Performance Tasks:</u> Complete the tutorial on how to use OneNote and Class Notebook.	<u>Other Evidence:</u> Observation (by administration and/or peer)

Create a Class Notebook for each course taught. In content area teams, collaboratively design a lesson introducing and integrating Class Notebook into the course curriculum. In content area teams, collaboratively design a student project that requires the use of the collaboration feature of Class Notebook. In content area teams, collaboratively design a rubric for evaluation of the student project.	Teacher reflection Student’s reflection of learning Student’s feedback of lesson Evaluation of student work
<u>Methods of Assessment:</u> Observation throughout professional learning session Discussion during professional learning session Completion of session feedback form Observation of lesson implementation Review of teacher reflection, student’s reflection of learning, and student’s feedback of lesson Evaluation of student work	
<b>Stage 3—Learning Plan</b>	
<u>Learning Activities:</u> With a thought partner, the learner will <ul style="list-style-type: none"> <li>• complete the individual interactive tutorial on One Note.</li> <li>• complete the individual interactive tutorial on Class Notebook.</li> <li>• create a Class Notebook for each course he/she teaches.</li> </ul> In content area groups, the learners will <ul style="list-style-type: none"> <li>• collaboratively design a lesson introducing and integrating Class Notebook into the course curriculum.</li> <li>• collaboratively design a student project that requires the use of the collaboration feature of Class Notebook.</li> <li>• collaboratively design a rubric for evaluation of the student project.</li> </ul>	
<u>Activities to be Completed Outside of Scheduled Sessions:</u> Schedule a time to observe a colleague teaching the collaboratively designed lesson (each learner must observe a minimum of one colleague). Once all content area team members have completed their observations, meet as a team to discuss the lesson and modify for future use. Reflect on lesson implementation and student learning. Gather feedback from students on their interpretation of their learning.	
<b>Session 3—Using OneDrive and Online Word, Excel, &amp; PowerPoint</b>	
<b>Stage 1—Desired Results</b>	
<u>Established Goals:</u> The learner will be able to use OneDrive and Online Word, Excel, and PowerPoint. The learner will be able to create a shared folder for each of his/her classes. The learner will be able to design a lesson that introduces OneDrive and Online Word, Excel, and PowerPoint to his/her students. The learner will be able to create a lesson that requires students to use either Online Word, Excel, or PowerPoint and submit to the teacher via OneDrive.	
<u>Understandings:</u> The importance of digital citizenship	<u>Essential Questions:</u> How can integrating technology into the curriculum enhance

How to use OneDrive, Online Word, Excel, and PowerPoint How to create a shared OneDrive folder for each of his/her classes How to integrate OneDrive, Online Word, Excel, and PowerPoint into the course curriculum	student learning and positively impact achievement?
<u>The learner will know...</u> How to use OneDrive. How to create a shared OneDrive folder for each of his/her classes. How to effectively use Online Word, Excel, and PowerPoint within the course curriculum.	<u>The learner will be able to...</u> Create a shared OneDrive folder for each class period he/she teaches. Design a lesson that introduces OneDrive and Online Word, Excel, and PowerPoint to his/her students. Design a lesson requires the students to use Online Word, Excel, or PowerPoint and submit through OneDrive. Teach the lesson he/she developed to his/her students.
<b>Stage 2—Assessment Evidence</b>	
<u>Performance Tasks:</u> Complete the tutorials on how to use OneDrive, Online Word, Online Excel, and Online PowerPoint. Create a OneDrive shared folder for each class. In content area teams, collaboratively design a lesson introducing and integrating OneDrive and Online Word, Excel, and PowerPoint to the students. In content area teams, collaboratively design a student project that requires the use of either Online Word, Excel, or PowerPoint and submission through OneDrive. In content area teams, collaboratively design a rubric for evaluation of the student project.	<u>Other Evidence:</u> Observation (by administration and/or peer) Teacher reflection Student’s reflection of learning Student’s feedback of lesson Evaluation of student work
<u>Methods of Assessment:</u> Observation throughout professional learning session Discussion during professional learning session Completion of session feedback form Observation of lesson implementation Review of teacher reflection, student’s reflection of learning, and student’s feedback of lesson Evaluation of student work	
<b>Stage 3—Learning Plan</b>	
<u>Learning Activities:</u> The learners will be divided into content area teams for the entire session. For each feature—OneDrive, Online Word, Online Excel, Online PowerPoint—the following will occur: <ul style="list-style-type: none"> <li>The learner will complete the individual interactive tutorial.</li> <li>The learner will engage in a small group discussion around the feature, recording highlights of the group’s discussion and ideas</li> </ul>	

for integration on chart paper. <ul style="list-style-type: none"> <li>Each small group will share with the large group their thoughts and ideas for integration.</li> </ul> The groups will collaboratively design a lesson introducing students OneDrive and Online Word, Excel, and PowerPoint. The groups will collaboratively design a lesson that requires the students to use either Online Word, Excel, or PowerPoint and submit through OneDrive. The groups will collaboratively design a rubric to evaluate the students project.	
<u>Activities to be Completed Outside of Scheduled Sessions:</u> Schedule a time to observe a colleague teaching the collaboratively designed lesson (each learner must observe a minimum of one colleague). Once all content area team members have completed their observations, meet as a team to discuss the lesson and modify for future use. Reflect on lesson implementation and student learning. Gather feedback from students on their interpretation of their learning.	
<b>Session 4—Using Video</b>	
<b>Stage 1—Desired Results</b>	
<u>Established Goals:</u> The learner will be able to upload, share, and download a video from the Video feature of Office 365. The learner will be able to design a lesson that requires students to view, upload, and/or share a video using the Video feature of Office 365.	
<u>Understandings:</u> The importance of digital citizenship How to use the Video feature of Office 365	<u>Essential Questions:</u> How can integrating technology into the curriculum enhance student learning and positively impact achievement?
<u>The learner will know...</u> How to use the Video feature of Office 365.	<u>The learner will be able to...</u> Upload, share, and download a video from the Video feature of Office 365. Design a lesson that requires students to view, upload, and/or share a video using the Video feature of Office 365.
<b>Stage 2—Assessment Evidence</b>	
<u>Performance Tasks:</u> Complete the tutorial on how to use Video. With a thought partner, design a lesson introducing the Video feature to your students. With a thought partner, design a lesson that requires students to view, upload, and/or share a video using the Video feature of Office 365. With a thought partner, collaboratively design a rubric for evaluation of the lesson.	<u>Other Evidence:</u> Observation (by administration and/or peer) Teacher reflection Student’s reflection of learning Student’s feedback of lesson Evaluation of student work
<u>Methods of Assessment:</u> Observation throughout professional learning session Discussion during professional learning session Completion of session feedback form Observation of lesson implementation	

Review of teacher reflection, student’s reflection of learning, and student’s feedback of lesson Evaluation of student work	
<b>Stage 3—Learning Plan</b>	
<u>Learning Activities:</u> With a thought partner, the learner will <ul style="list-style-type: none"> <li>complete the individual interactive tutorial on Video.</li> <li>design a lesson introducing the Video feature to your students.</li> <li>design a lesson that requires students to view, upload, and/or share a video using the Video feature of Office 365.</li> <li>design a rubric for evaluation of the lesson.</li> </ul>	
<u>Activities to be Completed Outside of Scheduled Sessions:</u> Reflect on lesson implementation and student learning. Gather feedback from students on their interpretation of their learning.	
<b>Session 5—Using Sway</b>	
<b>Stage 1—Desired Results</b>	
<u>Established Goals:</u> The learner will be able to create a presentation using Sway. The learner will be able to design a lesson introducing and integrating Sway to his/her students.	
<u>Understandings:</u> The importance of digital citizenship How to use Sway	<u>Essential Questions:</u> How can integrating technology into the curriculum enhance student learning and positively impact achievement?
<u>The learner will know ...</u> How to use Sway	<u>The learner will be able to ...</u> Create a presentation using Sway. Design a lesson that introduces and integrates Sway into the curriculum.
<b>Stage 2—Assessment Evidence</b>	
<u>Performance Tasks:</u> Complete the tutorial on how to use Sway. With a thought partner, design a lesson using Sway introducing the Sway to the students. With a thought partner, design a lesson that requires students to use Sway to complete a project. With a thought partner, design a rubric to evaluate the student project.	<u>Other Evidence:</u> Observation (by administration and/or peer) Teacher reflection Student’s reflection of learning Student’s feedback of lesson Evaluation of student work
<u>Methods of Assessment:</u> Observation throughout professional learning session Discussion during professional learning session Completion of session feedback form Observation of lesson implementation Review of teacher reflection, student’s reflection of learning, and student’s feedback of lesson Evaluation of student work	
<b>Stage 3—Learning Plan</b>	
<u>Learning Activities:</u> With a thought partner, the learner will	

<ul style="list-style-type: none"> <li>complete the individual interactive tutorial on Sway.</li> <li>design a lesson using Sway introducing the Sway to the students.</li> <li>design a lesson that requires students to use Sway to complete a project.</li> <li>design a rubric to evaluate the student project.</li> </ul>	
<u>Activities to be Completed Outside of Scheduled Sessions:</u> Schedule a time to observe a colleague teaching the collaboratively designed lesson (each learner must observe a minimum of one colleague). Once all content area team members have completed their observations, meet as a team to discuss the lesson and modify for future use. Reflect on lesson implementation and student learning. Gather feedback from students on their interpretation of their learning.	
<b>Session 6—Using Yammer</b>	
<b>Stage 1—Desired Results</b>	
<u>Established Goals:</u> The learner will understand the features of Yammer and how they can benefit his/her students learning. The learner will be able to design a lesson introducing and integrating Yammer into his/her curriculum.	
<u>Understandings:</u> The importance of digital citizenship How to use Yammer with students	<u>Essential Questions:</u> How can integrating technology into the curriculum enhance student learning and positively impact achievement?
<u>The learner will know ...</u> How to use Yammer	<u>The learner will be able to ...</u> Create a Yammer group for each course he/she teaches and any extra curricular activity he/she supervises. Design a lesson that introduces and integrates Yammer into the curriculum.
<b>Stage 2—Assessment Evidence</b>	
<u>Performance Tasks:</u> Complete the tutorial on how to use Yammer. Create a Yammer group for each course and extra curricular activity you are responsible for. Design a lesson that introduces and integrates Yammer into the curriculum.	<u>Other Evidence:</u> Observation (by administration and/or peer) Teacher reflection Student’s reflection of learning Student’s feedback of lesson Evaluation of student work
<u>Methods of Assessment:</u> Observation throughout professional learning session Discussion during professional learning session Completion of session feedback form Observation of lesson implementation Review of teacher reflection, student’s reflection of learning, and student’s feedback of lesson Evaluation of student work	
<b>Stage 3—Learning Plan</b>	
<u>Learning Activities:</u> Complete the tutorial on how to use Yammer. Create a private Yammer group for each course and extra curricular activity you are responsible for and invite your students.	

<p>As a content area team, create a private Yammer and assure all team members are members of the Yammer group. Join at least one other group on Yammer (private or public). Design a lesson that introduces and integrates Yammer into the curriculum. Design a lesson that requires students to use Yammer as a collaboration tool for a project. Design a rubric for evaluation of the project. Complete the evaluation of this session via the Yammer poll found under the <i>Best Teaching Practices Using Office 365</i> group.</p>	
<p><u>Activities to be Completed Outside of Scheduled Sessions:</u> Schedule a time to observe a colleague teaching the collaboratively designed lesson (each learner must observe a minimum of one colleague). Once all content area team members have completed their observations, meet as a team to discuss the lesson and modify for future use. Reflect on lesson implementation and student learning. Gather feedback from students on their interpretation of their learning.</p>	
<p><b>Session 7—Integrating Multiple Office 365 tools</b></p>	
<p>Stage 1—Desired Results</p>	
<p><u>Established Goals:</u> The learner will be able to design and implement a lesson or unit that incorporates multiple office 365 technologies.</p> <p><u>ISTE Standards</u></p> <ol style="list-style-type: none"> <li>1. Facilitate and inspire student learning and creativity</li> <li>2. Design and develop digital age learning experiences and assessments</li> <li>3. Model digital age work and learning</li> <li>4. Promote and model digital citizenship and responsibility</li> <li>5. Engage in professional growth and leadership</li> </ol> <p><u>Framework for Teaching Components</u></p> <ol style="list-style-type: none"> <li>1a. Demonstrating Knowledge of Content and Pedagogy</li> <li>1d. Demonstrating Knowledge of Resources</li> <li>1e. Designing Coherent Instruction</li> <li>2c. Managing Classroom Procedure</li> <li>2e. Organizing Physical Space</li> <li>3c. Engaging Students in Learning</li> <li>3d. Using Assessment in Instruction</li> <li>4a. Reflecting on Teaching</li> <li>4b. Maintaining Accurate Records</li> <li>4e. Growing and Developing Professionally</li> </ol>	
<p><u>Understandings:</u> The importance of digital citizenship How to use Email, Tasks, People, Calendar, OneNote, Class Notebook, OneDrive, Online Word, Excel, &amp; PowerPoint, Video, Sway, Yammer, Delve, and Newsfeed</p>	<p><u>Essential Questions:</u> How can integrating technology into the curriculum enhance student learning and positively impact achievement?</p>
<p><u>The learner will know...</u> How to effectively use more than</p>	<p><u>The learner will be able to...</u> Design a lesson that integrates</p>

<p>one office tool to enhance the learning of his/her students.</p>	<p>multiple features of Office 365. Design a rubric to evaluate the lesson.</p>
<p>Stage 2—Assessment Evidence</p>	
<p><u>Performance Tasks:</u> In content area teams, collaboratively design a lesson that integrates multiple office 365 tools. In content area teams, collaboratively design a rubric to evaluate the lesson.</p>	<p><u>Other Evidence:</u> Observation (by administration and/or peer) Teacher reflection Student’s reflection of learning Student’s feedback of lesson Evaluation of student work</p>
<p><u>Methods of Assessment:</u> Observation throughout professional learning session Discussion during professional learning session Completion of session feedback form Observation of lesson implementation Review of teacher reflection, student’s reflection of learning, and student’s feedback of lesson Evaluation of student work</p>	
<p>Stage 3—Learning Plan</p>	
<p><u>Learning Activities:</u> In content area groups, the learners will</p> <ul style="list-style-type: none"> <li>• collaboratively design a lesson that integrates multiple office 365 tools.</li> <li>• collaboratively design a rubric for evaluation of the lesson.</li> </ul> <p>Each content area group will share their lesson design with the entire group. The rest of the group will provide feedback and suggestions. All members of the groups will individually complete the feedback form for the course.</p>	
<p><u>Activities to be Completed Outside of Scheduled Sessions:</u> Schedule a time to observe a colleague teaching the collaboratively designed lesson (each learner must observe a minimum of one colleague). Once all content area team members have completed their observations, meet as a team to discuss the lesson and modify for future use. Reflect on lesson implementation and student learning. Gather feedback from students on their interpretation of their learning.</p>	