



PROPOSAL FOR NORWICH UNIVERSITY

February 2018

OMEGA NOTES

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The Big Picture

With a nearly 200 year pedigree, Norwich University has been the pioneer of collegiate education. After 200 years, many things have changed but the commitment to providing the best education possible stands firm. As Norwich prepares to enter its third century of education, it is vitally important that the education technologies match the university's commitment to the best education possible. Omega Notes can facilitate a continued pedigree of academic excellence by providing an assortment of tailored learning solutions for the 21st-century student.

And today it is time to change! This proposal is for the system-wide implementation of the Omega Notes platform over the next two years. Phase one will include a pilot program over the summer semester. Phase two will continue the pilot and include the college of nursing for the fall semester. The third phase will bring the remainder of the university onboard the platform.

This proposal outlines the recommended path forward. However, we realize there are many variables and moving parts that can affect the implementation that we present. We are certainly open to discussing measures alternative to those suggested in this proposal.



Mission Statement

Omega Notes exists to redefine the way learning occurs. After personally experiencing outdated educational practices and flawed companion technologies, we have realized that the only way to captivate a 21st-century student is to build an ecosystem designed around their needs.

We provide students the content and tools they need to succeed in a medium in which they already use. The millennial student is constantly online: communicating with friends, researching new topics or working on class assignments. With the class being online, the class texts are still in print or isolated in some foreign electronic document. It is crazy to think that students will engage in a class without having access to the tools and technologies they need to study, collaborate and learn. We change the dogma by bringing the class materials into an online ecosystem.

When the students are suffering, professors are suffering as well. With Omega Notes, we aim to make it easier for professors to effectively and efficiently teach their students. No longer do they have to wait until after an assignment to see how well the students are learning. Omega Notes Analytics helps identify the students in need of extra assistance before the exam.

At the administrative level, it can be challenging to understand student behavior and course dynamics. Without understanding student behavior, it is impossible to operate the university efficiently. The little data that does exist is all generated at the end of the semester and typically biased by the student's emotions surrounding final exams. Additionally, students are notoriously shy about their educational needs. Traditional learning outcome assessments are hindered by reporting problems only once they have developed. This costly delay results in students failing or worse. With Omega Notes, universities can take a proactive stance to identifying and preventing problems before they even occur.

Universities cannot maximize their educational impact without considering the needs of the different parties involved. Any practical solution must meet the needs of the students, faculty, and university personnel to truly improve learning outcomes. With Omega Notes, we recognize the different needs brought forth by each group, and we aim to not only match but exceed their expectations through custom learning solutions. We are here to redefine the way learning occurs.



Our Services

Simply put, we provide students the content they need in a medium in which they already use. At the same time, we maximize teaching efficiency by providing the tools and analytics back to professors and administrators to indicate student comprehension. We are not one tool but rather an ecosystem of learning.



We have elements of Micropublishing, Bookstores, Course Management Systems (CMS), Studying Tools, Social Media, Analytics Tools, and more.



Below you will see an overview of the site and our services categorized into four segments: Course Packs, Collaboration, Assessments, and Analytics.

Course Packs

1. E-Reader

- i. Our e-reader gives you the ability to create interactive e-books for your class. Students can take notes, draw pictures, search for terms, highlight and much more all in the course pack. We provide the content the students need in the medium in which they use.



2. Low Cost

- i. Over the past 40 years, the price of textbooks has risen over 800%.¹ More and more students are not buying textbooks because they are so expensive. With Omega Notes, we can provide the specific content you need without any of the unnecessary fluff. Instead of purchasing three books that students use only a small portion, why not provide just the content they need?

3. Customizable

- i. Your course should revolve around the content you want; not the content publishers want you to buy. Choose content from sources such as textbooks, newspapers, videos, PowerPoints and more. Your content selection is only limited by your imagination. Best of all, we can provide as little or as much content as you would like.

4. Safe

- i. Omega Notes values your course materials and employs high-level security controls to prevent unauthorized distribution of Course Pack content. Our platform employs Two-Factor Authentication and prohibits emailing, sharing and downloading of course pack content.²

¹ Source: Huffington Post http://www.huffingtonpost.com/2013/01/04/college-textbook-prices-increase_n_2409153.html

² Students may download the notes that they have taken in the course pack. The course pack itself may be downloadable depending on the requirements of the professor. This would need to be discussed.



Collaboration

5. Notebook

- i. Designed to mimic social media sites, the Notebook allows students the ability to create and store Notes, Annotations, Flashcards and even Ask Questions. All note types can be created inside the course pack and centered on a specific section. The Notebook makes it easy to create, share and discuss course content.



6. Group work

- i. Easily create, participate in and monitor group work. With just a couple clicks, you can automatically create student groups. As a professor, you are added as a group member for every group. Now you can efficiently guide discussions and monitor group behavior to know who is actually working.

7. Anonymous Posting

- i. Students are often afraid to ask a question or engage in the class for fear of being wrong. With Anonymous posting, students have no reason not to engage. Students may also take Notes, Flashcards, and Assistance note types publicly, privately or anonymously.

8. Engagement

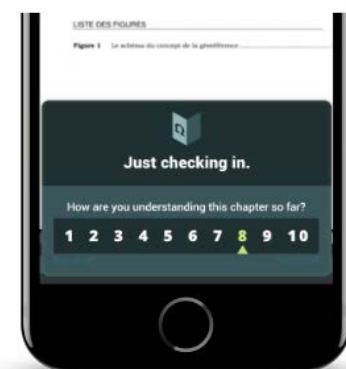
- i. Studies have shown that students are not learning like previous generations and the learning culture has yet to adapt to the millennial generation. Omega Notes drives course engagement by providing all the tools students need to succeed in a medium in which they already use. On our platform students can collaborate on group readings, ask others questions, watch videos, study flashcards, and more all in an environment designed to mimic their culture.

Assessments

9. Quizzes

- i. Easily add quizzes to your course pack to assess learning. You can easily create multiple choice, true or false and short answer questions. Depending on how your content is structured, the quiz could be gated: students must achieve a particular grade on the quiz before proceeding to the next chapter.

10. Self-Assessments



- i. Our patent-pending technology provides insight into learning as it is occurring. As students consume the course pack, they will be periodically asked how well they understand the material. They can rate their understanding on a scale from extremely confused to complete comprehension. This technology also includes a timeout feature to understand why a student is on a page for an extended amount of time. Students may also provide optional comments on the material. All of this information is displayed for your convenience in an easy to use dashboard.

11. Feedback on Content

- i. When a student signifies that a chapter is completed, a more detailed self-assessment appears requesting users to state more detailed thoughts on the material. These questions can include items such as what the student found most difficult, what readings the student liked the best, what changes the student would desire and more.

Analytics

12. Easy to use Interface

- i. Your professor dashboard has been thoroughly designed and optimized for the on the go professor. Our reporting provides you with the most up to date information on student behavior. You can easily look at an individual student, group or class behavior quickly and efficiently.

13. Effectively measure participation/engagement

- i. Omega Notes Analytics allow you to easily measure participation and engagement in your class. This system was designed to easily keep track of who is engaging versus those who are not. You can also monitor group behavior and see who is contributing to the group and the conversation or even guide the discussion yourself.

14. Understand who needs the most help

- i. Frequently students are afraid to ask for help or ask when it is too late. With Omega Notes Analytics, you can track individual, group or total course pack behavior. Easily see if a particular student is struggling with a particular topic or even a specific page. Our analytics tell you how the student studied and how it relates to others in the classroom. As a professor, you have unbiased information on what the student actually studied and how he/she participated.

15. Understand what to teach

- i. If students are spending unusually high amounts of time and continually scoring low on their Self-Assessments on a specific page of the course pack, then they likely need help. Plus, with the Self-Assessments, students have the opportunity to tell you what they are confused about, or whether or not the content was compelling. This information lets professors know what students want to see taught and what changes they would like to see to their learning.

16. Qualitative and Quantitative Reporting



- i. Omega Notes' patent-pending interface collects and reports detailed analytics on student behavior within the Course Pack. We collect both qualitative (Notes students have taken, comments on other notes, Self-Assessment reports) and quantitative (time spent per page, number of notes posted, number of comments, quizzes, Self-Assessment scores) data. All of the data is reported on individual, group, and class levels.

FAQ

Below is a list of Frequently Asked Questions about the site and our services.

1. General
 - a. Overview
 - i. How do students access the material?
 1. Students access the material by logging into the Omega Notes website and opening their course pack list. Each course pack contains the materials the students need for their class.
 - ii. How do students purchase the material?
 1. Just like any other e-commerce store, students select the items they would like to purchase and add them to their cart. They then create an account (which is free to do) and checkout on the site. After checking out, students can use our proprietary online viewer to access course content.
 - iii. How is payment on the site handled?
 1. Payment is all done via PayPal. Omega Notes does not store the user's payment information. PayPal is a secure payment gateway and supports all major credit cards.
 - iv. Is the site mobile friendly?
 1. Yes. The site was originally developed to work on mobile devices and then expanded out to work on laptops and PCs.
 - b. CMS
 - i. How is it different from a CMS?
 1. Course Management Systems are built to display the course material and the associated grading aspects. Texts are typically their own item unrelated to the CMS itself. Omega Notes provides a CMS like environment for the students to view their purchased texts. Most CMS have analytics, but the level of detail pales in comparison to Omega Notes. At the same time, with Omega Notes being so student-focused, our collaboration tools are designed to mimic the culture and media used by the millennial generation.
 - ii. Could this replace the CMS?
 1. Yes. The vast majority of course materials, including professor generated content, can be uploaded on to Omega Notes. Some advanced CMS features may not be present on the platform at this



time. However, due to a highly flexible backend framework, Omega Notes can incorporate advanced CMS functionalities based on Norwich's requirements and appropriate feasibility assessments.

c. Textbook

- i. Is a course pack in place of a textbook?
 1. It depends on the professor. If the professor is using multiple texts and/or bits and pieces from books, cases or videos, it makes more sense to use a course pack. If a professor is only using one text and he/she uses the whole thing, then Omega Notes could potentially provide that text as a course pack, but that would depend upon the publisher.
- ii. What is the cost difference on average between a textbook and a course pack?
 1. Typically, course packs are significantly cheaper than traditional books. For example, a professor wanted to use a portion of a book that retailed at \$54.99. Considering the professor only wanted a part of the book, he did not think it was fair to make the students buy it for the course. Instead, he created a course pack that contained three chapters from the book plus his own quiz. Omega Notes sold this to the students at \$21.95. Another scenario is the case of a professor who wanted portions of multiple books and cases. There were a total of 3 books that combined retailed for over \$120. This course pack was sold to the students for \$22.95.

2. Services

a. Course Pack Building/Maintenance

- i. Who builds the course pack?
 1. After a professor determines the content he/she requires, Omega Notes will acquire the permissions and digitally create the course pack.
- ii. How long does it take to create the course pack?
 1. Creating the course pack itself can take anywhere from less than an hour to a few hours depending on the amount of content. Acquiring the rights can take up to a couple of weeks depending on the situation. Usually, a course pack can be created within a week of receiving the order.
- iii. Is there a limit to the size of the course pack?
 1. No. However, if the course pack is very large, the chances are that there is a significant amount of material that will cost more money to obtain the rights. Consequently, the cost to the students will be higher.
- iv. Can the course pack be edited throughout the semester?



1. Yes. Course packs are not fixed. The content can fluctuate depending on the professor's needs. However, any additional material that would require permission from a rightsholder may take some time to acquire and add additional cost to the course pack.
- v. Are quizzes built by professors or Omega Notes?
 1. The professors design the content of the quizzes. Omega Notes handles the actual building of the quizzes.
- vi. What about Self-Assessments?
 1. Omega Notes handles Self-Assessments.
- vii. Does Omega Notes work with professors directly?
 1. Yes. Omega Notes is here to help professors. We work with professors one on one to ensure that they get the content they want at the best possible price for the students.

b. Data

- i. What types of data are you collecting?
 1. For course pack chapters, we collect the amount of time a user is on a particular page. We also know where the student was before that page and where the student went afterward. We are also collecting information on the students understanding of the material through the Self-Assessments. The information collected here is primarily quantitative in terms of the physical score of the understanding however qualitative data (their comments) are collected as well.
- ii. How long does the data last?
 1. The data lasts on our servers for as long as your contract lasts. The data can be downloaded to your servers if necessary.
- iii. Who has access to the data?
 1. On a class level, only the professor of the course. In levels above that, access is determined by the administration. We can tailor access accordingly.

c. Course Pack Content/Permissions Management

- i. Do you obtain the permissions from the copyright holders?
 1. Yes. We work with a consortium of publishers and brokers to secure permissions at the lowest possible price.
- ii. What is the cost of permissions?
 1. The cost of permissions depends on multiple factors: the specific text, the number of pages used, and the number of students in the class. Most publishers apply a per page per student fee to these metrics to determine a price. Per page, costs can be from \$0.10 to \$0.5. Usually, the number is around \$0.25 per page per student. This price is just a range. Some publishers charge a flat fee regardless of the amount used. It is unique to each scenario.



- iii. How long does it take to acquire the permissions?
 - 1. Depending on the text it can take anywhere from a few minutes to a couple of weeks to acquire permissions.
- iv. Can the professor's own material be there?
 - 1. Yes. Professors are encouraged to include their own material in the course pack. By doing so, they can gain a better understanding of how the students consume the material and where improvements can be made.
- v. What types of material can be posted in the course pack?
 - 1. The types of materials vary greatly. Books, journal articles, case studies, videos, etc. If for whatever reason Omega Notes cannot display the content itself, the site could always post a link to the material in the course pack.
- vi. How long do the permissions typically last?
 - 1. It really depends on the publisher. The typical default is one semester. Purchasing permissions for one semester are much cheaper than purchasing permissions for perpetuity. However, if there exists a need to provide access to a document for an extended duration, Omega Notes could certainly work to obtain those rights.
- vii. Who owns the permissions when they are purchased?
 - 1. Ownership of the permissions depends on the pricing concept. In option 1, the university owns the permissions. In option 2, Omega Notes owns the permissions. Both options allow students to purchase a license to view the material.
- viii. Is there a limit to the material that is placed on the site?

3. System

- a. Course Pack
 - i. Is the Course Pack downloadable?
 - 1. Not usually. The students, faculty, and administrators get the most value out the platform when the content is virtual only. If the material is downloaded and viewed offline such as in print form, students lose access to collaborative tools, and faculty and administrators do not know how well the students are learning. Additionally, permissions are usually considerably more expensive for digital and print rights than they are for digital only. Consequently, we highly recommend having the course packs be digital only. We can make the course packs downloadable if it is a requirement for the professor. However, we strongly encourage professors to keep their content online only.
- b. Assessments
 - i. Who creates quizzes and what does it mean for a quiz to be gated?
 - 1. Omega Notes provides professors with the ability to design quizzes. Depending on how content is structured, a quiz could be



gated: students must achieve a specific grade on the quiz before proceeding to the next chapter.

ii. Who creates the SA and when do they appear?

1. Self-Assessments are created by Omega Notes. They appear in three different instances. If the student is on a page too long the Idle Self-Assessment will appear. Intermittent Self-Assessments appear periodically as the student is studying the material. Finally, the End Self-Assessment appears once the student has finished the reading.

c. Analytics

i. How does Omega Notes help measure student engagement?

1. Omega Notes allows you to easily measure participation and engagement in your class for individual students or a group of students. Through our reporting on the time students spend studying, their comprehension of the material, quiz results, and notes taken, you can gain an understanding of the level of engagement in the course. Additionally, you can monitor group behavior and see who is contributing to the conversation or even guide the conversation yourself.

ii. How do analytics benefit the professor?

1. Our analytics let professors know what students need help with and what changes they would like to see to their learning. Professors can easily see if a particular student is struggling with a certain topic or even a specific page. Professors can now save time and optimize their teaching by understanding who needs help before the exam.

iii. How do analytics benefit the students?

1. If the professors understand the behavior of the students, they can tailor their teaching approaches accordingly. Some situations in which analytics are particularly beneficial include: when a student asks a professor why he/she did so poorly on the exam, the analytics can be cross-referenced with the exam results to show what the student did and did not understand. Another scenario is when a student is confused with the material but is afraid to convey that to the professor. The analytics show the unbiased behavior. Finally, the analytics can even help students study by pairing students together based on their comprehension of the material such as in the peer-to-peer algorithm.

iv. How do analytics benefit university administrators?

1. It all comes down to optimizing teaching and learning efficiency. The analytics can help identify the students most likely to fail or flunk out of the university. The analytics are also extremely beneficial in correlating studying behavior with learning outcomes.



Why do students continue to fail in class X? Is it because the course is very difficult, the students are lazy, or is there some problem with the way the class is taught? These types of questions can quickly be answered with the analytics. This information allows the administration to identify subpar situations and prevent future unfavorable scenarios.

- v. Who has access to the data collected on the platform?
 1. Our reporting provides you with the most up to date information on student behavior. Naturally, professors are allowed access to the data. Upon request, Omega Notes can share relevant data with university officials and/or academic advisors.
- vi. Can you provide an example of the power of this data?
 1. Yes. Currently, we have a reciprocal peer-to-peer algorithm designed to maximize partner/group learning. We take the data from how the students are learning, grade them on their understanding of the material, and match them such that each person is bringing some knowledge to the table. For example, John really understands chapter 1 but is confused with chapter 2 whereas Sam is lost in chapter 1 but thoroughly comprehends chapter 2. The algorithm will say these two people should study together because they can help each other out.

d. Notebook

- i. What is the Notebook?
 1. The Notebook is a place for students to take and share notes relevant to their course pack. The platform itself was designed to mimic social media sites like Pinterest. Students can write notes, study with flashcards, and ask questions all in the Notebook. All of the functionalities can be public, private, group, or anonymous. Students can also opt to take notes in the course pack. These notes will appear in the Notebook as well.
- ii. Can the professor view private notes or anonymous notes?
 1. Private notes are private to the individual that created them. Professors cannot view a student's private notes. Anonymous notes are viewable by anyone.
- iii. Can the professor post anonymously?
 1. Yes. To everyone else in the class, the anonymous note appears no different than any other anonymous note. This can be particularly useful in situations where the professor wants to indiscreetly probe students understanding or casually generate a discussion.
- iv. Is there any cost for using the Notebook?
 1. No. The Notebook is free to all users of Omega Notes.
- v. How long do notes last?
 1. Notes taken in the Notebook or course packs last in perpetuity.



- vi. Are notes downloadable?
 - 1. Yes. Students are welcome to download their notes at any time.
- e. Tech Specs
 - i. Is the site mobile friendly?
 - 1. Yes. It was developed to work on mobile devices first and then expanded outwards from there.
 - ii. How do you work with students with disabilities?
 - 1. We strive to provide the best possible experience to all our users. Students seeking an accommodation can contact us at support@omeganotes.com. Omega Notes will provide reasonable accommodations pursuant to the Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA).
 - iii. Can this plugin to a CMS?
 - 1. At this time the platform does not plugin to a CMS. However, this can be negotiable for a large plan.
 - iv. Who handles Tech Support?
 - 1. Omega Notes operates a 24-hour hotline through which users can ask questions and resolve basic technical issues. For advanced support, users will be asked to submit an error report to our development staff. We can provide in-person or online training to university staff and faculty.

Implementation

	Summer 2018	Fall 2018	Spring 2019
Pilot			
College of Nursing			
Undergraduates			

Phase 1 (Spring/Summer 2018):

Phase 1 will be a pilot program run in a handful of classes. The goal of this period will be to allow students, faculty, and administrators get a feel and understand the functionality and services provided by Omega Notes.

Phase 2 (Fall 2018):

Phase 2 will include a continuation of the pilot program for a few classes. This semester marks the first semester of actual use. The College of Nursing will be the first college using the platform.

Phase 3 (Spring 2019):

Phase 3 will bring the remainder of the university onboard the platform. The College of Nursing will continue to use Omega Notes.



What It Will Cost

Pricing for a system like this is very difficult to calculate. With the needs of each professor being different, and therefore no standardization in the cost of permissions, there is no silver bullet number. Plus, we want to provide you with some different ways to price this out. Listed below are two pricing concepts. Both concepts use the following assumptions:

Assumption	Value	Logic
Number of Students	3152	From the IPED 2016-2017 Listing
Number of Classes Per Student Per Semester	4.4	Calculated from number of occupied seats against the number of students
Percentage of Students Purchasing the Course Pack	100%	The Course Pack is required, and students must purchase it.
Number of Classes at Norwich Per Semester	572	Calculated out from Spring 2018 Course Listing
Cost of the Permissions	\$15	Previous Course Pack permissions typically were around \$18. The \$15 accounts for courses that do not require a paid text.
Average Amount of Assembly Time Initially	4-5 Hours	From Previous Experience. This is definitely on the higher end.
Average Amount of Assembly Time Renewing Course Pack	1-2 Hours	From Previous Experience. This is also likely on the higher end.

Option 1

In this scenario, the professor would decide the content he/she would like for the course pack. Omega Notes would negotiate with the rightsholder(s), acquire the content, and invoice Norwich at the rightsholder(s) cost of content. There would be no Omega Notes markup on the permissions instead there would be an hourly rate of assembly. Once built, Norwich would sell the course pack via the Omega Notes platform to the students. The price of the course pack would be marked up such that Norwich is covering their cost of permissions plus a small profit. A small commission would go to Omega Notes for handling the buyer/seller transaction. Finally, Norwich would pay the data license fee based on the number of students purchasing the course packs.

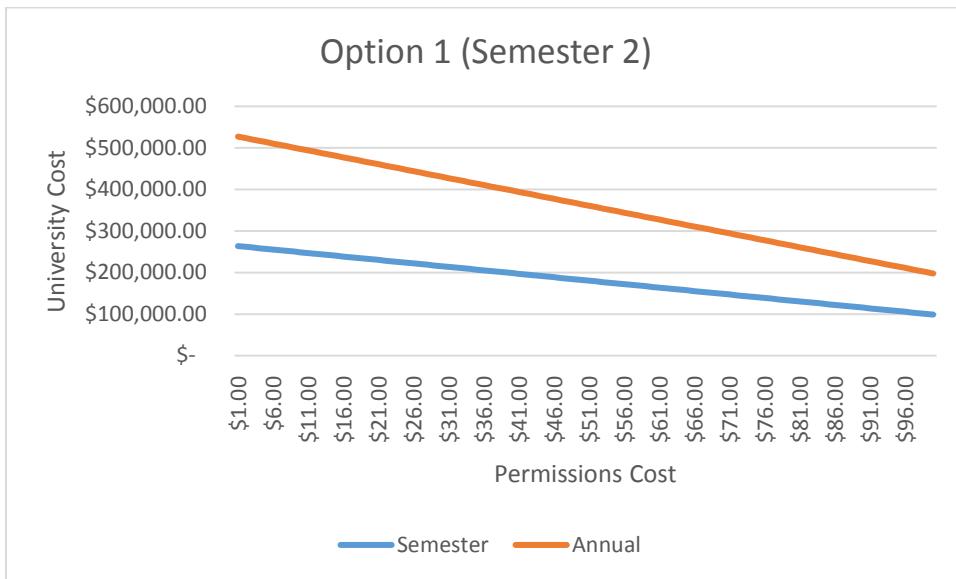


Option 1	
Copyright Permissions	Paid for by the University, sold to students at a markup.
Assembly Cost	\$100 per hour of assembly per course pack.
Data/License Fee	\$15 per student per class per semester.

Predicted Cost (First Semester): \$33.82

Predicted Cost (Second Semester): \$17.32

This option is unique in a few different ways. First, this model allows the university to directly control what the cost to the student is. If the university wants to subsidize the cost or make a small profit, the university is free to do so. Additionally, the primary cost to the university is the assembly cost. Once the course pack is built, chances are it will not need to be totally redone every semester. Consequently, the cost brought forth by the assembly likely drops over 75%. This option is more cost effective in the long run.



Option 2

This scenario is similar to Option 1 as Omega Notes would go and acquire the permissions from the rightsholder(s). Omega Notes would then markup the content and sell it to the students. The university would not be paying for the assembly cost. Instead, the data/licensing fee would be increased 33%.

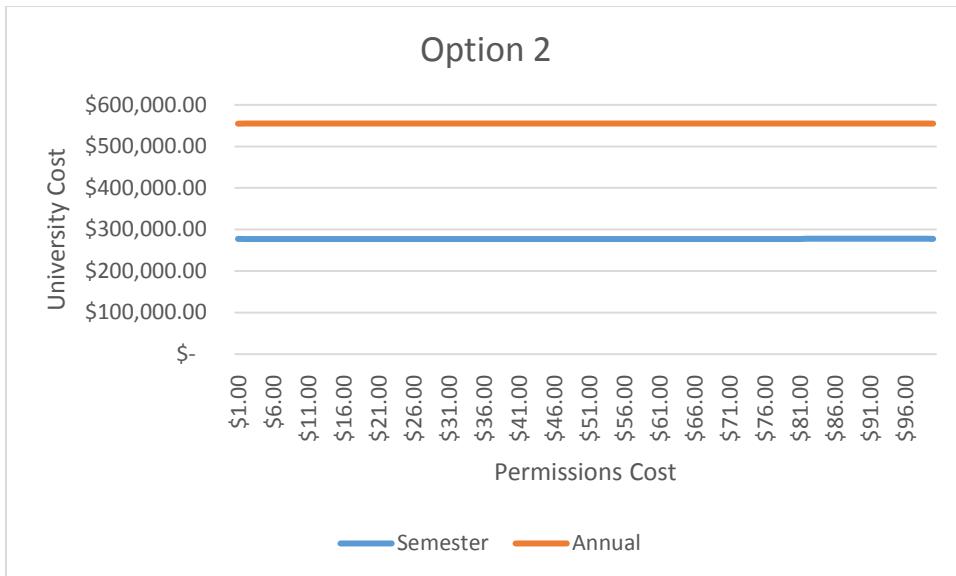
Option 2	
Copyright Permissions	Paid for by Omega Notes, sold to students at a markup.
Assembly Cost	Included in the price of the Data/Licensing Fee
Data/Licensing Fee	\$20 per student per class per semester



Predicted Cost (First Semester): \$20.00

Predicted Cost (Second Semester): \$20.00

The advantage of this concept is that the price per student per semester is fixed. It will always be \$20 per student per class per semester. The disadvantage is that there is reduced control on the selling price to the students and there are no cost savings once the course packs have been created. Upfront, this option is more cost effective. However, in the long run, Option 1 is more cost-effective.



Additional Considerations

Both concepts are based upon a pay per use model for the permissions. There may be alternative methods for paying for the permissions such as an annual license. This could significantly curb the cost for a large implementation. From our research, annual licenses are only provided to academic institutions. They appear to cover most of the texts used in our sample of Norwich's classes. If an annual license would be something of interest, we can review that in more detail.

