

COMPARATIVE ANALYSIS

Written for client, Acias LLC and system **Qlovi**



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EXECUTIVE SUMMARY

Comparison analysis can help product design and evaluation by highlighting key variations between different products that share similar functionality and purpose. This comparison analysis provides examination of direct, indirect, partial, and analogous competitors of Qlovi, a web-based application that is designed to motivate K-12 students to read. Our team looked into different products that compete with Qlovi at some level and examined shared functionality and design. We established framing criteria to compare platforms and research each product individually. We defined ground of comparison based on information we collected through surveys of teachers and students. Additionally, we considered other criteria like design, affordability and basic functionality to compare these platforms. We chose these following applications and platforms: Accelerated Reader, Scholastic 180°, Physical Textbooks, Amazon Kindle, Feedly. We used evaluation matrix to compare each product on a scale of one to five, with one being non-existent to five being excellent. After extensive research we found number of recurring themes. Among the findings were that competitors use audio-support within their platforms, involve parents in the learning experience, and possess additional accessibility and visual customization functions. After discussing our findings, a number of recommendations were made in order to improve the design and functionality of Qlovi.

INTRODUCTION

In this report we are providing a comparison analysis for Qlovi, which is a web-based application that is currently in development by Acias LLC. The overall purpose of Qlovi is to encourage, enable, and enhance learning through reading in a primary school environment. Qlovi provides indicator analytics on students' performance.

Qlovi has two primary target populations: English teachers in primary schools and their students. In addition to these groups, there is a secondary target population that is composed of all other teachers in primary schools that utilize either fiction or non-fiction literature in some form or fashion, such as those that administer social science or history courses.

Qlovi aims to achieve its purpose by serving as an electronic book (eBook) repository for its target populations. It has arrayed itself to cater to two user groups: teachers and students. In regards to the former, teachers will use the system to identify appropriate literature available within Qlovi's library for assignment to students. Students will then read the specified material to answer questions or provide feedback, which will demonstrate their comprehension. In regards to the latter, students use the system to identify literature of personal interest within Qlovi's selection to consume on their own.

To enable these uses, Qlovi aims to incorporate an intuitive user-interface that emphasizes choice and accessibility for its student users while simultaneously providing teachers the ability to obtain instant feedback and measure student comprehension of the assigned material. The system incorporates a number of functions and features that enhances its performance in these roles. This includes the integration of a recommendation service that allows individual students to find books of interest as well as tracking analytical information regarding student performance and activities.

STUDY PURPOSES & MOTIVATIONS

In this comparative analysis research, we are aiming to compare Qlovi with other five similar competitors in different levels to understand both the strength and weakness of Qlovi. The purpose of this research is:

- Learn about existing feature in similar products
- Find out where Qlovi's competitors succeed and fail
- Make recommendations on improving current features or adding news ones.
- Understand where Qlovi is positioned in the market

By understanding these perspectives of comparators, Qlovi can have a better view of its position in the market. We hope this report would help Qlovi to strategically develop popular features and improve on existing ones.

METHODOLOGY

PROFILE OF COMPETITORS

We conducted our comparative analysis on five direct and indirect comparators products. We found out eReaders market is extremely competitive and it is not easy to break in. Additionally, there are number of free and commonly used platforms that could compete with Qlovi. The most important aspect of this market is access to content. Without critical content, any platform is likely not to catch on. Besides direct competitors, there are ranges of products that indirectly can compete with Qlovi in different functionalities. Some of these products are commonly used RSS feed application that display content tidily.

We provide comparison at different criteria or framing comparison. We chose five competitors based on their relevant characteristics and feasibility of their application in classroom for learning. We separated competitors into one of four categories:

- **Direct Competitors:** Offering the same functions in the same way.
- **Partial Competitors:** A competitor that covers some but not all functions.
- **Indirect Competitors:** Offering the same functions in a different medium.
- **Analogous Systems:** A non-competitor that might give ideas about how to provide functions better.

We sought obvious competitors like textbooks, Amazon Kindle and direct competitors, which offer similar services. Here is description of selected competitors.

Direct Competitors	<ul style="list-style-type: none"> • Accelerated Reader (http://www.renlearn.com/ar/) • Scholastic 180° (http://www.scholastic.com/home/)
Partial Competitor	<ul style="list-style-type: none"> • Physical Textbooks
Indirect Competitor	<ul style="list-style-type: none"> • Amazon Kindle (https://kindle.amazon.com/)
Analogous System	<ul style="list-style-type: none"> • Feedly (http://www.feedly.com/)

Accelerated Reader: Accelerated Reader is one of the world's most popular reading programs. The software program, commonly referred to as AR, is designed to motivate students to read and to assess their overall understanding of the books that they are reading. The program was developed by Renaissance Learning Inc., which has several other programs closely related to the Accelerated Reader program.

Scholastic 180°: Scholastic 180° is a comprehensive system of curriculum, instruction, assessment, and professional development designed to raise reading achievement for struggling readers in grades 4–12+. This system is designed for any student reading two or more years below grade-level.

Physical Textbooks: Traditional paper textbooks.

Amazon Kindle: This is a series of eBook reading systems. There is a large amount of variance of the features among these systems. The target Kindle in our analysis will be a third-generation model. This model supports monochrome graphics.

Feedly: Feedly is a RSS feeding application that integrates with many social networking services. People use RSS service to read articles from different websites. The reading

interface in Feedly is quite polished and friendly. Readers can subscribe to readings from different sources and display content neatly.

KEY DIMENSIONS

In our comparative analysis, we compared these products in several dimensions. These dimensions we chose were based on the findings in our previous works in interviews with teachers and surveys with students, and together with our observations on Qlovi and these competitors' features. Consolidated altogether, we concluded in four dimensions:

- **Costs:** Price for the physical platforms and content.
- **Functionality:** Functions provided within the systems and how they are related to the target users.
- **Usability:** Ease of operation and general straightforwardness.
- **Visual Experience:** Aesthetic features.

RESEARCH & ANALYTICAL METHODS

After selecting five competitors, each team members researched one competitor. We tried out each product if accessible, or gather information through product's main website, demos, official instructions and client reviews. We completed comparative analysis matrix and scored each feature for each product. We gathered all the data together and put into the comparative analysis matrix (Appendix A). Our group conducted two meetings to discuss design advantages and disadvantages of each product and how it related to context of learning for K-12 students and Qlovi overall design and function. We observed number of findings and we formulated recommendations based on these findings.

FINDINGS & RECOMMENDATIONS

Finding #1: Competitors provide an audio-supported learning environment.

Currently, Qlovi only works as a reading platform. Through our research, a number of direct competitors provide text-to-voice capability and functionality to record audio quizzes. These features are available in Accelerated Reader and Scholastic 180°. In both platform, students can listen to the pronunciation of vocabulary, record their own pronunciation in the application, and improve English through listening to accurate pronunciations. Similarly, Amazon Kindle offers partial audio support for selective books. These findings suggest that incorporating audio support feature is a trend on reading platforms. Thus, lacking this capability can place Qlovi in undesirable position in the market.

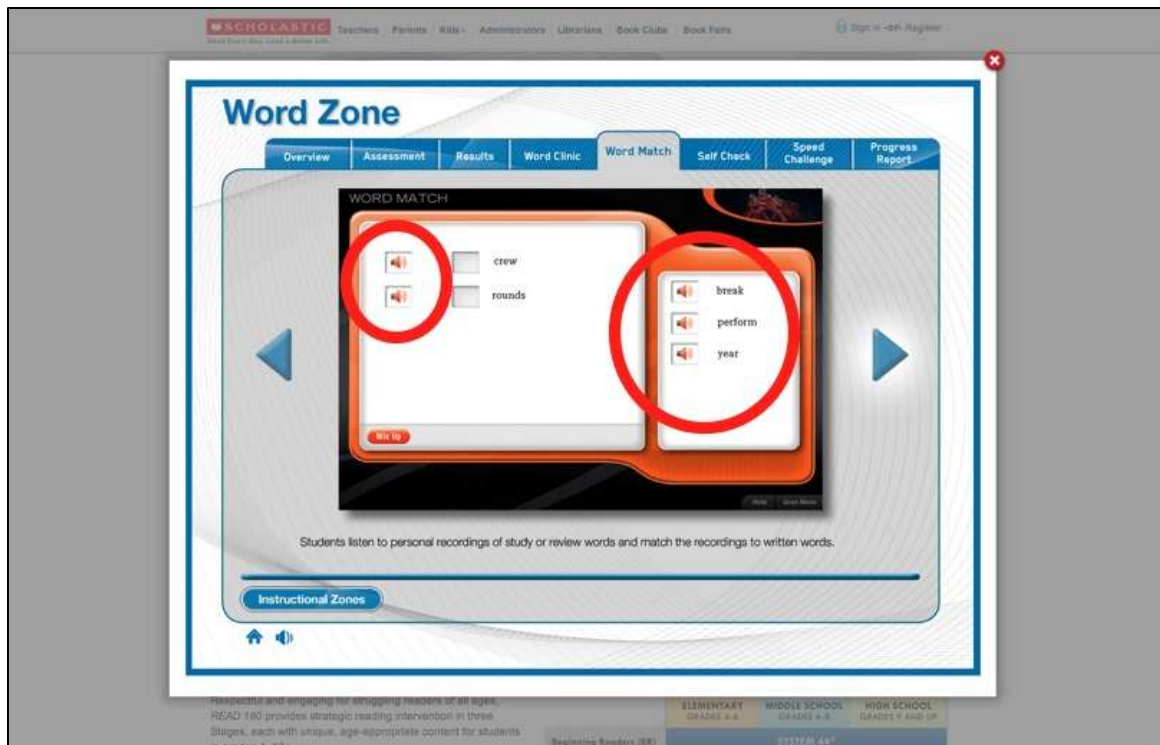


Figure 1: Scholastic 180° audio aid feature

Recommendation: Incorporating voice recording feature and providing text-to-speech capability would place Qlovi close to most dominating competitors in the market. Adding such features might be a difficult to incorporate at this stage. Our team suggests utilizing native built-in Voice Over function in different operating systems. For example, there is system built-in Voice Over feature in Mac OS, as well as the Text-to-Speech function in Windows 7. Qlovi may consider allowing users to activate the function when the operation system meets the requirement. This could be an active approach to reach the reluctant k-12 readers. Additionally, this feature would aid English learners to learn proper pronunciations.

Finding #2: Competitors incorporate effective tutorial and walk-through functionality.

Learning on electronic reading platform is unconventional for the majority of both target user groups: teachers and students. Naturally, providing tutorials and timely clarification when needed is indispensable for a product aiming change a traditional medium like paper textbooks. Currently there is help page that supports users to find answers on their own. However the lack of walk-through tutorials in documents or video might potentially make novice from mastering Qlovi quickly and easily. Major direct competitor for examples, Accelerated Reader holds regional seminars for educators, and there are video tutorials and toll-free numbers to provide more interactive and instant technical support; equally, Scholastic 180° offers video tutorials n their website.

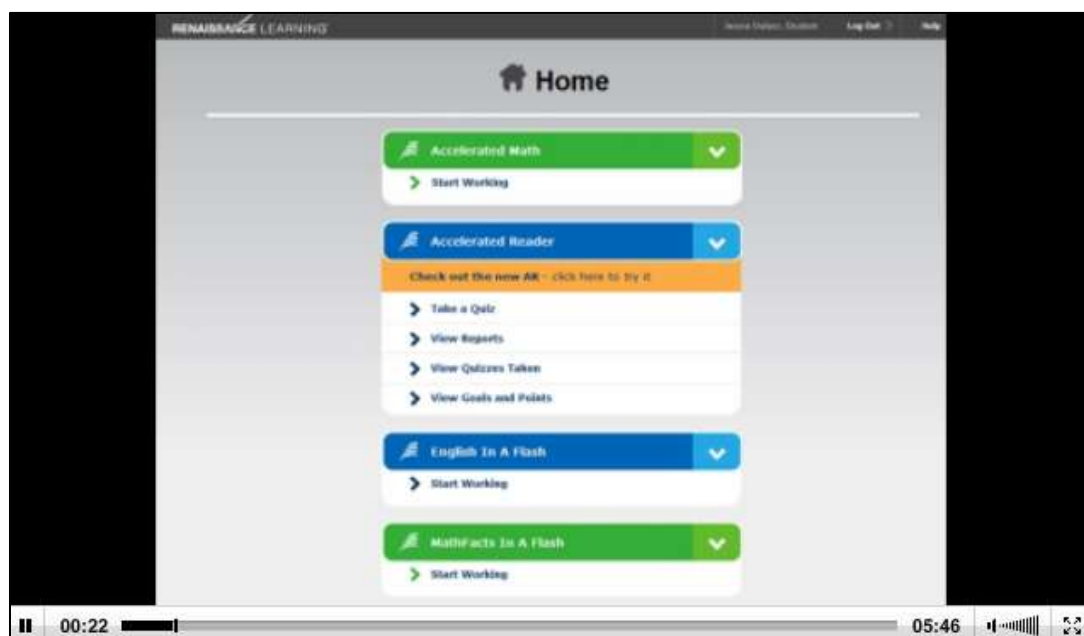


Figure 2: Accelerated Reader online video tutorial

Recommendation: Our team recommends including a targeted tutorials in written format with screenshots or in video form. A concise video tutorial would be more effective. Making video tutorial is easy to follow and help students and teacher master Qlovi. Producing video or screenshot tutorial should be easy to produce. Additionally, a forum where users can post common problems or difficulties with can help Qlovi to fix bugs early and quickly. Forum also can work as a platform for teachers to exchange ideas, quizzes and best methods of using digital content.

Finding #3: Competitors invite parents to the eReading learning experience.

Two immediate competitors of Qlovi have functionality, where parents can login into the eReader system to keep track of children performance in readings, tests and can purchase additional books. This is functionality involves an important stakeholder in education of a child. Family plays important part in incentive children to become avid readers. Direct competitor, Accelerated Reader provides Home Connect feature, which is a tool that connects the school and home to keep parents, informed of their child's progress and encourages the child to practice reading at home. Additionally, parents can receive emails that reveal results for Reading practice quizzes and vocabulary practice quizzes and provide links to the Web site to check progress.

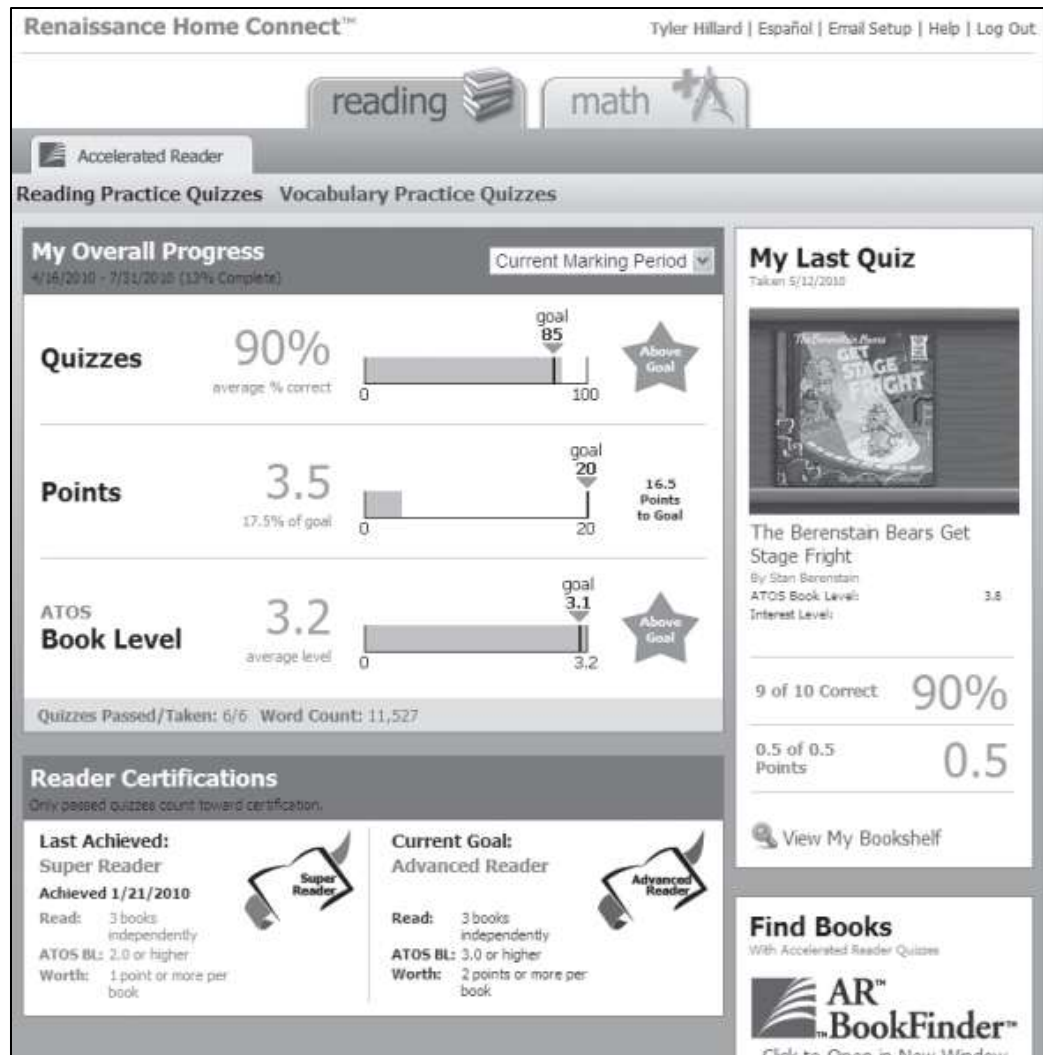


Figure 3: Accelerated Reader Home Connect Feature

Recommendation: Implementing a similar feature that allows parent to login into eReader system to keep track of children performance and ability to assign books for extra readings. This feature can be effective motivational tool for students, especially during summer and out of school periods. This feature can help creating sense of community between parents and teachers to help students learn more effectively. Allowing parents or family members to view child's progress toward reading goals and certification would make learning at home and in schools more interconnected.

Finding #4: Competitors provide features that allow users to export data.

Qlovi is aiming to provide analytics of student's reading behaviors. Results from analytics are important to many stakeholders: parents, teachers, and school administrators. Currently, users of Qlovi only can access individual students' data one by one. Users cannot get the

information that can summarize over groups. Direct competitors like Accelerated Reader provide comprehensive reports that provide overview of students' performance and in some cases provide predictive analytics about scheduled required state. These reports are presented in different format and layouts: tables, charts, graphs, etc. Additionally, these reports can show reports for one student, group of students or a whole class. Direct competitor like Accelerated Reader provided an easy way for teachers and parents to view student records and export them in different format.

Grade 10 End-of-Year Expectations													
Use Accelerated Reader (AR) data to monitor College and Career Readiness (CCR) by comparing reading practice data with expectations, defined by the Common Core State Standards (CCSS).													
% Fiction / Nonfiction: 30 / 70 Remember to consider students' reading that is not tracked with an AR quiz.													
Average % Correct: 85 CCSS recommends students read with a high level of comprehension; 85% or above is an AR best practice.													
ATOS Book Level (BL): 10.5-12.0 Independent reading is typically done at a level lower than CCR expectations, closer to students' ZPD.													
Student	STAR Reading™			Quizzes Passed	Fiction				Quizzes Passed	Nonfiction			
	A Most Recent IRL	B ZPD (in Record Book)	C % Fiction Nonfiction		Average BL	D Average % Correct	E Highest BL	F % Correct on Highest BL		Average BL	D Average % Correct	E Highest BL	F % Correct on Highest BL
Babb, Jeanna	11.7	2.9-4.3	100 / 0	3	3.2	68.3	10.5	75.0	-	-	-	-	-
Barlow, Dawn	11.1	4.8-10.9	100 / 0	5	6.0	90.0	10.5	100.0	-	-	-	-	-
Blackman, Mark	PHS	5.0-12.9	68 / 32	2	7.5	93.0	10.5	95.0	1	5.7	100.0	6.7	90.0
Cooper, Kevin	PHS	5.0-12.9	71 / 29	5	8.5	97.0	10.5	95.0	2	9.9	95.0	10.1	90.0
Derrick, Isabel	6.9	4.4-7.6	100 / 0	5	5.8	94.0	10.5	90.0	-	-	-	-	-
Galvez, Mario	9.8	4.6-9.3	100 / 0	2	6.1	90.0	10.5	90.0	-	-	-	-	-
Gaven, Julia	10.8	4.7-9.6	100 / 0	5	6.3	96.0	10.5	90.0	-	-	-	-	-
Grover, Jillian	7.2	4.5-7.9	100 / 0	5	5.7	91.0	10.5	95.0	-	-	-	-	-
Jean, William	6.5	4.0-6.2	100 / 0	5	5.3	93.0	10.5	85.0	-	-	-	-	-
MacDonald, Katie	8.6	4.8-8.5	100 / 0	5	6.0	96.0	10.5	100.0	-	-	-	-	-
Maxwell, Zach	6.3	4.1-6.3	31 / 69	1	10.5	80.0	10.5	80.0	3	6.8	76.6	7.2	70.0
Paulson, Carter	6.1	3.6-5.6	100 / 0	5	5.9	75.8	10.5	75.0	-	-	-	-	-
Rudd, Kisha	4.6	3.2-4.9	100 / 0	4	6.2	95.0	10.5	75.0	-	-	-	-	-
Schaefer, Russell	12.9	5.0-12.9	58 / 42	3	8.0	100.0	10.5	100.0	1	7.0	100.0	7.0	100.0
Wagner, Jason	11.9	5.0-12.9	100 / 0	4	7.6	97.5	10.5	90.0	-	-	-	-	-
Average			89 / 11	4	6.6	90.8	10.5	89.0	2	7.4	90.4	7.5	87.5

Figure 4: Accelerated Reader detailed report

Recommendation: Providing various options for exporting results would enhance Qlovi usability and make it more attractive to potential users. We suggest creating number of layout features, in which users can view students' performance and choose to interact with them. The current viewing option is very limiting. Because Qlovi is a web-based application, embedded analytics should be exportable in different format.

Finding #5: Competitors allow the sharing and proliferation of quizzes and personalized feedback mechanisms among the user community.

The most dominating reading application in the market comes preloaded with 150,000 quizzes. Each reading on Accelerated Reader platforms come with multiple quizzes, which serve as a quick assessment of student reading comprehension, vocabulary practices, literacy quizzes, and textbooks quizzes. Similarly, scholastic 180° offers similar service by offering predesigned quizzes with most readings. Currently Qlovi does not come with preloaded quizzes. Teachers have to design a quiz for every reading. Designing quizzes on

Qlovi is time consuming and unintuitive. It involves multiple steps and several dropdown menus. Additionally, building a rich quiz that designed to yield rich analytical data is complex and time consuming in Qlovi. Teachers have to indicate the analytics purpose of each question and assign values.



Figure 5: Interactive quiz section of Scholastic 180°

Recommendation: Our group recommends Qlovi to have work with publishers to design quizzes around readings. Although Qlovi is still in development phase, this feature would attract early adoption and help teachers to modify existing quizzes instead spend a lot of time creating new quizzes. We also recommend creating a feature in Qlovi to help teachers share quizzes. This could be a downloadable option with for each reading. Because analytics is important part of Qlovi, designing an indicative and diagnosing question might not be easy; we recommend for Qlovi to have tutorial section of teachers to help design analytical quizzes and offer examples.

Finding #6: Competitors provide extensive multilingual support & accessibility to users.

Many competitors of Qlovi provided users multilingual support and comply with accessibility standards. Accelerated Reader provides Spanish translation of their interface. Kindle provided multilingual support, both their interfaces and contents, in German, Italian, French, etc. Feedly also supports multilingual environment for English, German, Japanese, French, Italian, and Spanish speaking users. Scholastic 180° did not provided separate

interface for non-English speakers but they provided additional contents for English learners who use Cantonese, Hmong, Vietnamese, Haitian Creole, and Spanish (Figure 6).

Practice/Application

Check for Understanding

- Before students report, remind them to use the Content Words from their notes.
- At the end of each report, encourage students to discuss what was said using formal language: I agree with _____ because _____. I disagree with _____ because _____.

Discuss

Compare notes to complete the outline.

Report

Share Content Words from your notes with the class

Spanish Cognates

Content Words
Use cognates to develop academic language proficiency.

ENGLISH	SPANISH
evacuate	evacuar
hurricane	huracán
natural	natural
volunteers	voluntarios

See NED Research Foundation: (Joshi 15, p. 123)

Differentiated Support

BEGINNING

Vocabulary: Preteach Content Words
Introduce the Content Words before students view the video and complete the outline. Tell them that they will use these words to complete the sentences in the outline.

EARLY INTERMEDIATE

Vocabulary: Answer Questions Have students share Content Words by answering simple questions about the video.

- Who came to New Orleans to find animals that had been left?
- Where did the rescued animals stay?

INTERMEDIATE/EARLY ADVANCED

Writing: Write a Paragraph Have students write one paragraph about the video. Remind them to use their outlines to help them organize ideas.

Media Communications: Ask and Answer

Figure 6: Supporting material for Spanish speaking students – Scholastic 180°

Recommendation: Multilingual support can be helpful for non-English speakers to use Qlovi, especially considering that some of Qlovi users would be English learning students or non-English speaking parents. We recommend Qlovi should consider implementing multilingual interface support. It can be started with Spanish. This multilingual support should be consistent with the English version. With multilingual support, students and parents, who speak English as their second language, would get used to Qlovi interface more easily.

Essentials

What should be the default language for the Explore and Essentials pages?

- ✓ detect
- English
- Deutsch
- 日本語
- Français
- Italiano
- Español

try to optimize featured articles?

Figure 7: Multilingual interface support – Feedly

Finding #7: Competitors provide more emphasis on learning and understanding vocabulary.

Reading interface on Qlovi does not support dictionary function or provide vocabulary exercises. However, direct competitors provide features related to vocabulary mastering. Amazon Kindle provides integrated words definition features, using New Oxford American

dictionary (Figure 8). Accelerated Reader and Scholastic 180° do not provide dictionary functions as Kindle does. However, both products require students to put much effort in vocabulary learning. Accelerated Reader presents separate keyword column in each chapters and vocabulary quizzes. Scholastic 180° offer more features related to vocabulary learning, including vocabulary quizzes, spelling learning, and keyword highlighting.

Recommendation: We recommend Qlovi to include instant dictionary to help students learn new vocabulary. It can be integrated like Amazon Kindle, or listing new vocabulary in every chapters. This will increase student's understanding of the reading and the data gathered from this feature would provide important indicators about the progress of students.

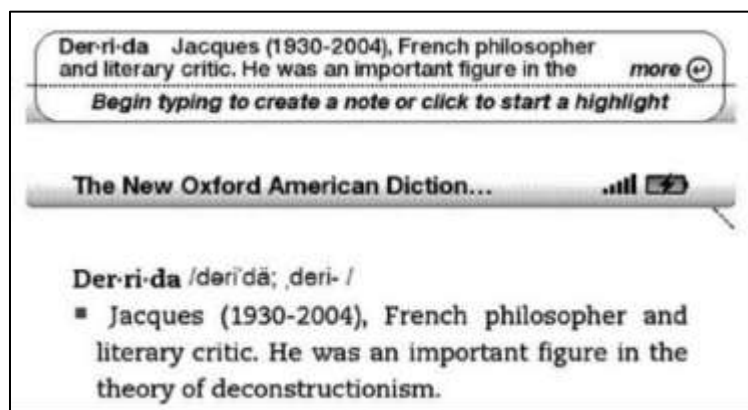


Figure 8: Dictionary Functionality in the Amazon Kindle

Finding #8: Competitors provide a consistent visual experience for users while reading.

Currently there are two reading interfaces on Qlovi: the light interface (Figure 9) which is aligned to the visual style of Qlovi, and the dark interface (Figure 10) which is resemble to a conventional reading interface. The light interface allows users to adjust font size and figure-ground color; when clicking on the page, it shows the page-flipping interaction. On the other hand, the dark interface contains less interactive effect and shows a scrolling interaction. Both the interfaces offer adequate function and good experience when reading respectively; however, the inconsistency might compromise the overall user experience. In addition, both the interface provides option to adjust view size when reading, but users may have to readjust the size every time they start reading a book. The analogous competitor Feedly offers a preference setting to control the overall visual customization (Figure 11); Qlovi may consider incorporate such a customization in the system.

Recommendation: Keep the customization in reading but also add a user setting page that allows users to customize their default interface. In addition, keep the consistent browsing

experience by choosing the light interface which is more in consistent with the overall visual aesthetics of Qlovi.



Figure 9: Qlovi's 'Light' Interface

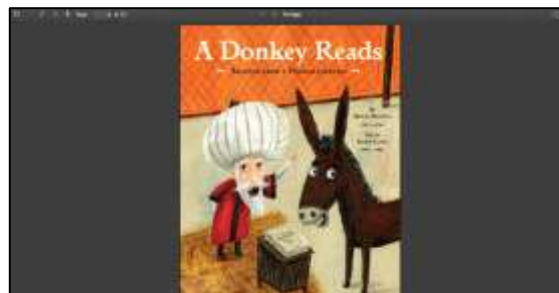


Figure 10: Qlovi's 'Dark' Interface

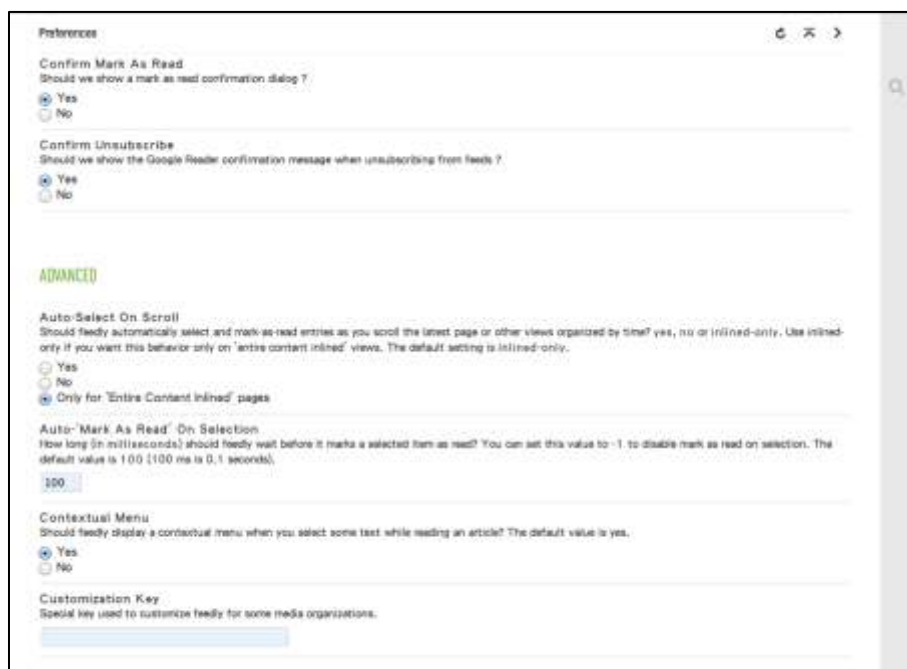


Figure 11: User preference settings in Feedly

DISCUSSION

eReaders market is still in infancy and there a lot of excitement and hype on how technology could revolutionizes learning in classroom. The market is crowded with products that provide interactive learning experience. Qlovi is still in development and testing stage. Qlovi can benefit learning from direct competitors and integrate commonly used features and application by target population. Products like Accelerated Reader have in been in the market for more than 28 years and it has strong user base.

There were number of limitations that hindered providing detailed comparison and research on competitors. Accelerated Reader and Scholastic are not free. We depended on limited demos, video presentation and reviews from educators. Some of the features we evaluated can be done without real access to the product, while others we could only judge by the information we got externally.

Another issue in our analysis is that we couldn't get the correct price information for Scholastic 180° and Accelerated Reader. The price of each product depends on different of variable. Accelerate Reader is sold by Renaissance Learning, which also produces wide range of educational products. Renaissance and Scholastic 180° are offered in bundled with other products. It also depends on the number of features wanted by schools.

CONCLUSION

In any startup business, comparison analysis plays important role in figuring out what is popular and existing standards. Our group conducted comparison analysis for Qlovi to assess existing products in the market and alternative platforms. After conducting research on each product, we noticed number of finding that ranged from accessibility, multi-language interface, and audio aid for learning reading. Based on these finding, we made number of recommendations to help improve the quality of Qlovi design and functionality. There were some limitations in assessing all direct products, because we didn't have full access to these. But we found enough information about all products that we included in this report.

APPENDICES

APPENDIX A: COMPARATIVE ANALYSIS MATRIX

Competitors/ Dimensions	Accelerate- reader	Scholastic1 80	Physical Textbooks	Amazon Kindle	Feedly
Cost					
Price (Platform) <i>Fixed Costs</i>	4	N/A	5	N/A	3
Price (Per Book) <i>Variable Costs</i>	4	N/A	3	N/A	5
Physical Space	5	4	1	5	4
Functionality					
Annotating	N/A	1	5	2	2
Sharing Annotations	N/A	1	1	3	N/A
Sharing to social network	N/A	1	1	1	5
Word Lookup / Definition	4	1	1	5	1
Class management / calendar view	5	5	1	N/A	3
Integration from other resources / file type	4	4	1	5	4
Diversity of materials & Content	4	3	5	5	5
Source Diversity	5	2	5	4	4
Archive contents	5	2	4	5	3
Whether the material is aligned with educational purpose	5	5	5	N/A	N/A
Inserting modules, editing / flexibility	4	2	N/A	N/A	N/A
Analysis: time tracking	5	5	N/A	N/A	N/A

Tutorials	3.5	4	N/A	3	1
Recommendations	3.5	4	N/A	N/A	4
Usability					
Ease of Navigation	4	?	5	4	5
Placement of link	4	?	1	N/A	2
Page indicator	5	?	5	5	4
Intuitive	4	? / 5	4	3	4
Physical Durability	3	5	5	4	2
Single Session Use Time (Device)	5	4	5	5	2 or 4
Physical Comfort	2	4	5	5	3
Accessibility (Handicap)	4	5	5	5	1
Distraction	4	3	5	N/A	2
Searchability	5	N/A	1	3	5
Visual Experience					
Layout	5	4	4	4	4
Use of Font and Size	4	5	5	5	3
Color Theme	3	5	3	1	4
Visual Customization	?	4	1	3	4

DIRECT COMPETITOR:

Accelerated Reader by Renaissance Learning programs

<http://www.renlearn.com/ar/>

TARGET SUMMARY:

AR is designed for student's grades 1-12. AR has been around since 1986. It is especially popular in elementary schools across the country. The program's main purpose is to determine whether or not the student has actually read the book. The program is designed to build and encourage students to become lifelong readers and learners. In addition, teachers can use the program to motivate their students by providing rewards that correspond to the number of AR points earned by the student. In addition, it requires internet connection. It does not need IT maintenance support from schools. Here are the main features of AR:

- Monitor students' progress toward College and Career Readiness expectations with the new CCR Report.
- Personalize and guide independent reading practice.
- Develop lifelong readers and learners.
- Tap into unlimited access to all quizzes and enjoy online support.
- Increase parental support with web-based, school-to-home communications.

CRITICISM OF ACCELERATED READER:

- awarding points for books feels arbitrary and random.
- students won't read books unless it is on the AR library because they want to earn points.
- Educators have argued that the use of Accelerated Reader does not teach reading for comprehension; it only teaches reading for recall.

COMPARABILITY MATRIX:

Competitors/ Dimensions	Score	Notes
Cost		
Price (Platform) <i>Fixed Costs</i>	5	It depends on the number of students, features, duration of subscription and whether it is bundled with other Renaissance Learning programs. full implementation ranges from \$2,000 to \$10,000 per school year for average school.
Price (Per Book) <i>Variable Costs</i>	4	about 145,00 books come with AR.

Physical Space	5	depends on platform it used on. AR is available on Desktop, laptop, tablet. it would like less space than standard books library.
Functionality		
Annotating	1	AR does not have annotation systems.
Sharing	2	Students can share reading metrics with parents, but not on social media nor classmates
Word Lookup / Definition	4	Provide vocabulary definitions based on readings. AR has search vocabulary.
Class management / calendar view	5	Layered and detailed content management. Dashboard has timeline for students.
Integration from other resources / file type	3	connect with parents with private portal. it also provide readings reports.
Diversity of materials / content	4	AR library include required readings and extra curriculum readings.
Source Diversity	3	AR works with big publishers mostly. AR has about 145 books.
Archive	5	it archive books and students' performance
Whether the material is aligned with educational purpose	5	Aligned with reading purposes.
Module editing / flexibility	4	AR comes with standardized and teacher can add quizzes. Definition of vocabulary. column of selected vocabulary/ keywords.
Analysis: time tracking	5	Provide comprehensive analytics for students' reading performance.
Tutorials	3	Provide tutorial for teachers on how to use the system for extra fees.
Recommendations	2.5	no recommendation system but books are categorized nicely.
Usability		
Ease of Navigation	5	Simple and clean interface.
Page indicator	5	page mark and sections are clearly indicated.
Intuitive	4	easy to follow UI.

Physical Durability	3	laptops, desktop and tablet are durable as physical books.
Single Session Use Time (Device)	2	there is additional fee per each use.
Physical Comfort	3	AS is not too comfortable to use.
Accessibility (Handicap)	4	AR complies with federal guidelines of accessibility.
Distraction	5	AR does not includes ads. no distraction.
Searchability	5	good search engine with categorized results.
Visual Experience		
Layout	4	Clear and simple layout
Use of Font and Size	5	easy to read and follow interface
Color Theme	4	Attractive combinations.
Visual Customization	?	not sure

REFERENCES:

<http://www.slideshare.net/psetser/accelerated-reader-overview-slide-show>
http://ies.ed.gov/ncee/wWC/reports/adolescent_literacy/accel_read/info.asp
<http://teaching.about.com/od/tech/fr/Accelerated-Reader.htm>
http://www.nytimes.com/2009/08/30/books/review/Straight-t.html?_r=0
http://en.wikipedia.org/wiki/Accelerated_Reader
<http://doc.renlearn.com/KMNet/R0055643A3828F81.pdf>

DIRECT COMPETITOR:

Scholastic180

<http://read180.scholastic.com/reading-intervention-program>)

COMPARABILITY MATRIX:

Competitors/ Dimensions	Score	Notes
Cost		
Price (Platform) <i>Fixed Costs</i>	N/A	no specification
Price (Per Book) <i>Variable Costs</i>	N/A	no specification
Physical Space	5	(depends on the electronic device being used - access through computer or tablet)
Functionality		
Annotating	1	not found
Sharing	1	not found
Word Lookup / Definition	2	word / spelling zone exist, not sure it has dictionary function
Class management / calendar view	5	(looks like it is aimed for covering whole classroom activities, related to the reading. Seems like to have many features (ex. whole group / small group agenda for certain reading. (ITS)), but was not able to check specifically)
Integration from other resources / file type	5	(web-enabled Interactive Teaching System / students can access wherever with internet access)
Diversity of materials / content	4	covers many topics
Source Diversity	5	Paperback & audio books
Archive	4	Provides agenda for teachers, probably provide students for their activities based on their assigned readings. but was not able to check specifically
Whether the material is aligned	5	Highly focused on classroom / educational use.

with educational purpose		provide guidebook for teachers and family. also covers vocabulary, writing, aimed for achieving suitable reading level for college and profession
Module editing / flexibility	3	Fixed course progress with each topics?)
Analysis: time tracking	5	Provide students to track their own progress questions to do / words to do / words to do / achieving the goal / unlocking success writing zones, able to track daily progress, with gamification features(badges) / questions Provide teachers recommended instructions, based on student's performance
Tutorials	4	Demo / teacher's guide / family guide
Recommendations	4	Well divided contents by students' reading / progress level
Usability		
Ease of Navigation	?	No specification
Placement of link	?	No specification
Page indicator	?	No specification
Intuitive	5	Very good on analytics part
Physical Durability	5	100% electronic
Single Session Use Time (Device)	4	Various materials and media use to keep students focused
Physical Comfort	4	Using computer / tablet
Accessibility (Handicap)	5	Paperback & audiobooks
Distraction	3	Very highly focused product and looks promising to keep user's attention / possible distractors by using computer or tablet (ex. Facebook)
Searchability	?	No specification
Visual Experience		
Layout	4	good. but somewhat look out fashioned
Use of Font and Size	5	did not spot problem
Color Theme	5	good

Visual Customization	4	good. especially visualizing analytics part. / ITS layout may seem bit complicated?
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REFERENCES:

<http://read180.scholastic.com/reading-intervention-program>)

(demo at: <http://read180.scholastic.com/reading-intervention-program/about>)

PARTIAL COMPETITOR:

Physical Textbooks

COMPARABILITY MATRIX:

Competitors/ Dimensions	Score	Notes
Cost		
Price (Platform) <i>Fixed Costs</i>	5	No platform is needed to read physical books
Price (Per Book) <i>Variable Costs</i>	3	Don't have to buy in huge quantity in general
Physical Space	1	Takes up physical space
Functionality		
Annotating	5	Annotating comes naturally/ organically
Sharing	1	Have to actually borrow the book and manually transcript
Word Lookup / Definition	1	Have to look up manually
Class management / calendar view	1	N/A
Integration from other resources / file type	1	N/A
Diversity of materials / content	5	Any kinds of resources could be included in physical books
Source Diversity	5	When incorporating other materials, it costs more to purchase the copyright compare to electronic
Archive	4	Textbooks themselves are a kind of information preservation. Only after a long time
Whether the material is aligned with educational purpose	5	Precisely aligned
Module editing / flexibility	N/A	N/A, manually
Analysis: time tracking	N/A	N/A

Tutorials	N/A	No tutorials needed in terms of utilizing the material/ medium. N/A because users have no needs to this function.
Recommendations	1	There could be extended readings, but not tailored to the reader.
Usability		
Ease of Navigation	5	Existing convention
Placement of link	1	N/A
Page indicator	5	page mark and sections are clearly layout.
Intuitive	4	Existing convention
Physical Durability	5	No problem when you drop a book; Not waterproof but much less risks compared with
Single Session Use Time (Device)	5	No limitation
Physical Comfort	5	Natural paper texture / page flipping / note taking...etc.
Accessibility (Handicap)	5	Physical books may include brails for more accessibility to visually impaired people.
Distraction	5	In general, no ads to distract readers; At least the ads are not animated.
Searchability	1	Have to look up manually
Visual Experience		
Layout	4	Clear layout
Use of Font and Size	5	Easy to read and follow convention
Color Theme	3	Less attractive compare with the electronic interfaces.
Visual Customization	1	Everything is fixed.

INDIRECT COMPETITOR:

Amazon Kindle

TARGET SUMMARY:

The Amazon Kindle, henceforth referred to as 'Kindle', is a series of eBook reading systems that have been made available for purchase since 2007. The Kindle platform resembles what we consider a tablet-based computing system. There is a large amount of variance of the features among these systems; for example, certain generations within the Kindle family have larger screens and resolutions, may be monochrome or full-color, display ads between pages, utilize a physical keyboard or touch screen to support interactivity, and ultimately cost different amounts for consumers to purchase.

For the purposes of this comparative analysis, the target Kindle will be a third-generation model. This model supports monochrome graphics. This version of the Kindle initially retailed for \$189 USD; an equivalent model can be presently purchased for \$139. For interaction purposes, it features a full QWERTY keyboard with a five-button arrow-based navigation mechanism. It also has four side buttons, two on each of the left and right sides of the platform, which allow the user to navigate back and forth between pages and chapters. It is equipped with both 3G and WiFi connectivity to allow transmission of information to and from the system.

The interface itself is plain and primarily navigated using the five-button arrow-based mechanism as noted above. While not standard, it is generally intuitive and easily learned after short exposure. It is highly accessible, and allows individuals to change font type, font size, and words per line. It also allows users to rotate the screen in any of the four directions, though this is configured and not reactive as is normally standard with modern tablets/smartphones. It also supports text-to-speech accessibility for those that may need it due to a disability or other impediment.

In order to obtain new content to read, users may upload it manually via a USB cable or purchase and download it straight from Amazon's online service. There is an abundant amount of content available through this online service and costs for electronic books are generally below those that would come with the purchase of a paperback version. However, individual book prices can vary significantly; they can range from free to tens of dollars.

The platform comes standard with a number of features that can assist comprehension. For example, users can move a cursor through a page using the arrow-keys; as they move the cursor in front of a word, the definition of the word appears in a tooltip at the top of the page. This definition is drawn from the Oxford English Dictionary, which is pre-loaded on the Kindle at purchase. Additionally, users can highlight text, create notes within the text, and share these notes that they have made with others. This can be done by linking their Kindle with various social networks; at this time both Facebook and Twitter are supported.

This platform is very easy to read and is portable. In spite of its monochrome display, it features a strong contrast between the black and white colors that makes it simple for the user to distinguish between text and background. The device itself is small and light-weight, making it easy to carry and

move; it can fit in a standard pants pocket, or in any normal-sized backpack or bag.

In regards to durability and longevity, the Kindle can last up to 30 hours of continuous use on a single charge; it consumes less battery life when not in use, but will eventually require roughly six hours of being plugged into an outlet in order to regain its full battery charge. It is constructed to survive falls from roughly three feet without significant issue, though the screen may become cracked if it is continuously dropped on a hard surface.

COMPARABILITY MATRIX:

Competitors/ Dimensions	Score	Notes
Cost		
Fixed Costs (Platform Price)	N/A	Wide range; target model retails at \$139. Cannot make a comparison to Qlovi due to unknown pricing scheme.
Variable Costs (Price Per Book)	N/A	Wide range; some selections are free whereas others can costs upwards of fifty dollars. Cannot make comparison to Qlovi due to unknown pricing scheme.
Physical Space	5	The Kindle is small and light-weight, especially when compared to the platforms Qlovi can be experienced on (Laptops, Desktops). It is even lighter and smaller than most traditional tablets, such a iPads.
Functionality		
Annotating	2	The Kindle supports annotating within texts; however, due to the somewhat clumsy physical keyboard it can take significantly longer to embed and read notes.
Sharing	3	Annotations can be shared via social networks such as Twitter and Facebook; however, sharing via e-mail does not appear to be supported.
Word Lookup / Definition	5	The Kindle provides on-the-fly word lookup as an individual scrolls through content, drawing from the Oxford English Dictionary.
Class management / calendar view	N/A	The Kindle provides no default class management functions.
Integration from other resources / file type	5	While the primary source of content for the Kindle is Amazon's online service, it allows users to upload their own PDFs or eBooks through a USB connection.

Diversity of materials / content	5	Putting aside the ability to upload personal content, Amazon's service offers hundreds of thousands of books available for download.
Source Diversity	4	The Kindle's primary source of content is through Amazon's service, but can accept user-uploaded data in MOBI/PDF format as well. It cannot directly download data from other eBook services such as Nook.
Archive	5	The Kindle can hold an estimated 3,500 books in its primary storage, and also has access to additional books via Amazon Cloud.
Material is aligned with educational purpose	N/A	The purpose of the Kindle is not educational; it can fulfill this role due to the diversity of material it has available.
Module editing / flexibility	N/A	The Kindle does not provide modules or 'quest packs' as Qlovi does.
Analysis: time tracking	N/A	The Kindle does not track analytics such as time spent per book.
Tutorials	3	The Kindle features a user manual pre-loaded into its memory and comes with physical documentation when purchased. It does not feature 'tutorials', however.
Recommendations	N/A	The Kindle as a platform does not provide recommendations; however, recommendations can be found via Amazon's online service.
Usability		
Ease of Navigation	4	It is generally easy to navigate the Kindle; books can be flipped through by page or chapter via navigational buttons on the sides of the platform, and 'home', 'back', and 'menu' buttons are featured to allow system navigation.
Placement of link	N/A	
Page indicator	5	The Kindle features a dynamic page and chapter indicator.
Intuitive	3	The user interface is somewhat intuitive once experienced, but newcomers may have difficulty navigating due to its unique interface and button layout.
Physical Durability	4	The Kindle can survive falls upwards of three feet and feels generally durable, but is prone to breaking if dropped numerous times on a hard surface such as concrete.

Single Session Use Time (Device)	5	The Kindle can last upwards of 30 hours on a single charge, or months at a time in hibernation.
Physical Comfort	5	The Kindle is light-weight,
Accessibility (Handicap)	5	The Kindle features a wide range of accessibility features, to include dynamic text sizing, word spacing, and text-to-speech.
Distraction	N/A	
Searchable	3	Books can be searched via keyword; however, due to the clumsy keyboard it can take longer to input searches and sift through results compared to searching on a laptop or desktop machine.
Visual Experience		
Layout	4	The Kindle's layout is minimalistic and generally easy to interact with.
Use of Font and Size	5	The default font is clear and easily readable. As noted above under accessibility, the font can be changed; either its type (Serif, Sans Serif) and its size and spacing.
Color Theme	1	The Kindle model that was reviewed is monochrome and features no color options.
Visual Customization	3	While it allows for dynamic font, size, and screen rotation preferences, the Kindle does not allow users to alter the layout or color preferences.

ANALOGOUS COMPETITOR:

RSS Feeder - Feedly

<http://www.feedly.com>

COMPARABILITY MATRIX:

Cost	Score	Notes
Price (Platform) <i>Fixed Costs</i>	3	Free to use
Price (Per Book) <i>Variable Costs</i>	5	Free to book RSS resources
Physical Space	4	Available on desktops and mobile devices
Functionality		
Annotating	2	You can add some tags or save for later to read
Sharing	N/A	Integrate with FB, twitter, Google+, Buffer, and e-mailing
Sharing to Social Network	5	
Word Lookup / Definition	1	Not embedded in the system but can use operation systems' function
Class management / calendar view	3	Not for class management but is ordered by date and time. And there is no calendar view.
Integration from other resources / file type	4	Greatly integrated with all other internet resources, but only with RSS service provided sites.
Diversity of materials / content	5	Internet resource is pretty diverse. You can choose what ever you want. But it is hard for the beginner to choose the resource they want to add here.
Source Diversity	4	
Archive Content	3	There is a history view to browse older articles. Also, you can save articles you like to the saved list for your own reference.
Whether the material is aligned with educational purpose	N/A	Not specific for educational purpose, but you can tailor your resource to that.
Module editing / flexibility	N/A	No such concept as module

Analysis: time tracking	N/A	No tracking function for your reading time
Tutorials	1	No official tutorial I found for now. But it is not hard for the new comer to get use
Recommendations	4	Yes, you can use explore function on a particular category and there are some featured recommendation for you. However, this is a passive recommendation, only appears when you click and enter to the pages.
Usability		
Ease of Navigation	5	Overall, it is a breadth-first navigation, which is easy to use.
Placement of link	2	No underline to indicate it is a link. Only changes the mouse pointer to a hand icon when hover over links, but still, not every one is clickable.
Page indicator	4	No page indicator. But I don't think it needs that because of the breadth-first navigation characteristic.
Intuitive	4	For basic functions are intuitive to me, but still there are some not.
Physical Durability	2	It depends on the devices you use. But overall, digital devices are not so durable compared to paper printed books.
Single Session Use Time (Device)	2 or 4	Again, depends on the devices. If you use desktop, it' not a constraint, but in other devices, you should consider the battery capacity.
Physical Comfort	3	The only concern here is that reading in electronic screen is not so comfortable compared to papers.
Accessibility (Handicap)	1	No specific functions tailored to this.
Distraction	2	(have some distraction)There is a side bar on the right that presents some other information I don't think I should pay attention to
Searchability	5	Yes, you can search articles in your feeds, and also in the internet. You can even search for some interesting feeds to add into your own.
Visual Experience		
Layout	4	The layout is clear
Use of Font and Size	3	Typeface is fine to me, and you can adjust that. However, the size of the text is relatively too small to me, and I couldn't find a way to change it.

Color Theme	4	Overall, the themes are simple and clear, and you can apply different themes that are provided.
Visual Customization	5	Yes.