



The Kohelet Prize 2016

THE CYBER PATH TO CRITICAL AND CREATIVE THINKING

Abstract

This is a revolutionary approach which incorporates innovative technology to engage students in using higher order thinking in Jewish texts. Using the platform of Bloom's Revised Taxonomy, students are guided to create their own content as a means of presenting their understanding of the texts. This approach is also being used by secular studies teachers in our school.

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The Cyber Path to Critical and Creative Thinking

Based on our firsthand experience as classroom instructors and our extensive research on the topic, we have found that there is problem in our educational system in engaging students in Jewish texts.

At the core of this problem is the lack of development of Hebrew language skills, circumscribing the extent to which they can experience the texts firsthand, inhibiting comprehension and preventing textual analysis. This in turn contributes to waning motivation to focus on and explore text.

Moreover, it may inhibit students from further reading or exploration on their own, and delving more deeply into comprehension and analysis of text. Since much of vibrant, involved Jewish life revolves around text, prayer, holiday rituals and observances, and of course, Torah study, students who do not find meaning in text may become detached from meaningful Jewish engagement.

We set out to find a way to master language skills and to learn the fundamental concepts of Torah while engaging in higher order thinking activities based on Bloom's Revised Taxonomy. With this goal in mind, we developed a system combining creative adaptation of extant technology with the best, research-based pedagogical methodology.

Our revolutionary approach incorporates innovative technology with traditional Jewish learning to involve and engage students, to master prerequisite skills while leading them to higher order thinking and mastery of all Jewish texts.

To accomplish this goal, we invented a new type of "app smashing" that has never been used in a Judaic studies classroom. App smashing combines a multitude of apps, in conjunction, to achieve a specific goal. In our case, specific apps target each skill set needed to learn a text and scaffold the learning process to enable higher order thinking.

We use the following apps to reach these goals and have synchronized them with Anderson and Kratwohl's (Anderson & Kratwohl, 2001), revision of Bloom's Taxonomy. The following is an outline of our program:

Remembering:

Quizlet and Quia: The students use a flash card app to record and practice vocabulary words. They create their own games with vocabulary words to make the study more engaging. Students proceed at their own speed until they are proficient.

We now plan to extend the use of these tools to Tanach and use them for the learning of shorashim and key words. Students can choose to take computer graded quizzes as many times as they choose.

Doodlecast: The instructor creates a video with voice over on image of the Gemara with a virtual pointer focusing on words as he speaks. Children are capable of practicing on their own without any outside help. This tool can guide the students to properly pronounce the Tanach words.

Understanding:

Cabinet: Our students use this app to highlight the Gemara in different colors to differentiate between questions, answers, proofs, and explanations. The students highlight shorashim in the words of the pasuk. Students mark words that they find difficult so that they can add those words to their Quizlet flashcards. The highlighting can be easily revised when needed.

Applying:

Ebackpack: The students apply their newly learned vocabulary by recording themselves reading the Gemara. The instructor uses the recording as an assessment. We use this tool for Tanach by having the students record their reading of psukim. Some students may choose Doodlecast to use the virtual pointer. The instructor receives the recordings, evaluate the student's work, and provide written or oral feedback.

Analyzing:

Popplet: Students use this to create a mind map/diagram to explain each stage of the Gemara. Apple TV is used for students to display their projects. In Tanach, the students create a mind map of shorashim and their connected words in the parasha.

Evaluating:

Google Docs, Classkick: The instructor assigns questions on parts of the Gemara for the students to work on in pairs. The student's work is observed on the instructor's iPad in real time. In Tanach classes, more advanced students use group collaboration to translate each pasuk. They use their knowledge of shorashim to create their own translations during group discussion. Less advanced students can be given a list of vocabulary words to help them with their work.

Thinglink: The students write their own notes and explanations directly linked to any word in the text. They add their translations to each pasuk which appear when the words are clicked on. For less advanced students, the instructor can add his own translations as a scaffold.

Creating:

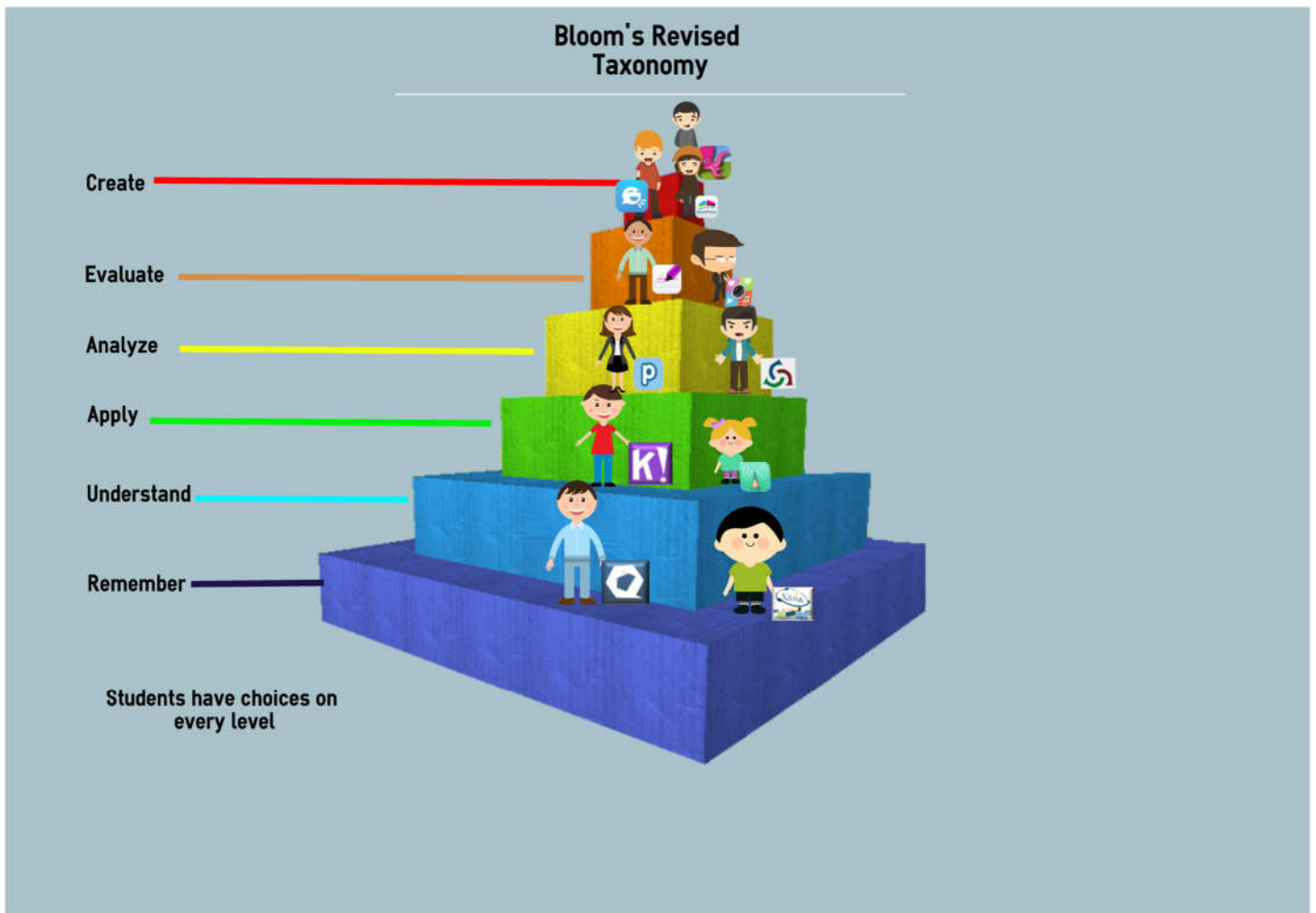
Explain Everything, Telegami, Green Screen, iBooks Author: A student creates impressive visual presentations that connect their own audio explanation of the Gemara.

After translating the psukim In Tanach the students in collaborative groups are asked to record their questions. The students use Sefaria.org to click on the pasuk and view the commentaries that answer their questions.

The students create their own books using iBooks Author. The books include their translations, questions, and notes.

To see the bigger picture in the sefer that they are learning, the students use mind mapping apps such as Popplet to keep a running diary about larger themes. For example, if the students are learning about Avraham, they can add to their mind maps whenever they come across a new insight on an ongoing basis.

Green screen and Telegami are used for students to create a presentation about the Parasha. The background image for the presentation can be images that illustrate the Parasha in conjunction with explanations of the text.



Additionally, when technology becomes a seamless tool, we can personalize the classroom for each individual student; give them control over their own learning achieving real differentiation. They are not judged based on a “cookie cutter” based grading system but are motivated to succeed by their own accomplishments.

The role of the teacher moves from frontal instructor to facilitator who guides students in creating their own learning experiences. The role of the teacher now encompasses guiding the students in their meta-cognitive skills to develop a sense of which learning tools and approaches work best for everyone. The teacher is not a test giver who gives grades without feedback. Formative and summative evaluation is used to help the instructor and students plan their direction in learning. It empowers the students themselves to do their own formative and summative assessments through the app system. The role of the instructor also shifts towards designing the optimal environments for student interactions with the learning materials.

In our system, there are multiple pathways for achieving the same goal. Therefore, the instructor needs to serve as an advisor to help students determine if their choices of tools and approaches are effective. Some students may need encouragement to continue their paths, while others may need redirection.

The short-term goals of our program are to:

- Give students the skills needed to be able to learn Jewish texts independently while allowing them to advance at an individual pace.
- Increase motivation and desire to learn
- Enable them to determine their own learning needs based on feedback and direction from the instructor.

The long-term goal is to empower and enable all students, regardless of ability and background, to become independent lifelong learners who understand and embrace Jewish values of learning and tradition and are motivated by a sense of personal growth and fulfillment.

We have firsthand experience in implementing this program and have seen the success of this revolutionary system as our former and current students have mastered skills that previously took years to achieve.

The following are some examples of how we are using apps in the classroom

Self-Assessment:

Practice Quiz

<http://www.quia.com/quiz/5502960.html>

Practice Quiz

<http://www.quia.com/quiz/1362332.html>

Rags to Riches Game:

<http://www.quia.com/rr/1085661.html>

Flash Cards and matching game:

https://quizlet.com/_1neohx

You can also use a QR code:



Practice reading: The instructor makes a recording for independent practice.

<https://drive.google.com/file/d/0B5XzWZnsIfI6dHBwVFNObkJKcFk/view?usp=sharing>

Self-assessment: When the student clicks on a word, the translation appears.

<https://www.thinglink.com/scene/710863889503354882>

An example of student work highlighting the Gemara. Questions are in yellow and answers are in blue.
Click on the following



Foxit Reader PDF
Document

Or click on this link:

<https://www.dropbox.com/s/h1qfqf4mykd4tpv/Gemara%20Color.Yosef%20A.pdf?dl=0>

An example of student work using Popplet to outline the Gemara:

Click on the following



Foxit Reader PDF
Document

Or click on this link:

<https://www.dropbox.com/s/otnonvpuyakpwzw/Brachot%20Chart.pdf?dl=0>

Students create their own PowerPoint presentations on the Gemara

<https://www.dropbox.com/s/uyjc4qji05uinkk/Tefilat%20Hashachar%20Joseph.pptm?dl=0>

PowerPoint presentations can be made into videos:



Or click on this link:

<https://www.dropbox.com/s/kpdkaj6iplldg4x/Tefilat%20Hashachar%20Joseph.mp4?dl=0>

Students create their own Telegami presentations on the Gemara:



Or click on this link:

<https://telligami.com/gami/IR03S0/>

Bibliography:

Anderson, L. W., Krathwohl, D. R., & Airasian, P. W. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York, NY: Longman