



**How Do I AcDec**

*or*

**Learning How to Succeed in the Crazy World of Decathlon**

**Stephen Bergauer**

# + Who is this kid?

- 7<sup>th</sup> year involved with Decathlon
- As a student: Highest individual scorer at 2012 AZ AcDec State Competition (9,051); medaled in all events
- Later: Co-founded Decademy; Study Math, Finance, Economics at ASU; Asst. coach old HS team



# + Why Decathlon?

- First, let's start with some motivation: why are people (coaches and students) crazy enough to compete in this intense program? Why do we spend nearly an entire year studying a massive textbook so we can go and take tests on weekends – for fun? In other words, what do you see as the primary goal of your program? Why are YOU involved in Decathlon?

There are obviously a number of reasons why students and teachers participate in Academic Decathlon. As I'm sure you've seen, many students join Decathlon for practical reasons: they need something to put on their resume, their friends are in the program, or coaches or another teacher pushed them into competing.

However, there are many benefits to Decathlon . . .





# Benefits

- (1) Eliminating the silos of traditional HS study is a key point of Decathlon. By creating a “big picture” view and tying various subjects together, we can make information more meaningful and relevant to students – because they can see how it applies to other subjects.
- (2) Whether we like it or not, standardized testing is an important part of high school and the college application process, and it doesn’t appear to be going away anytime soon. Most studies agree that somewhere between 50-70% of standardized test scores reflects “test-taking ability,” which is a combination of intelligence and practice at taking exams. Decathlon gives students that practice.
- (3) By studying and working together, students can make lasting friendships and, more importantly, push each other to learn more and compete better – we all know that a little friendly competition can really motivate students to do better.
- (4) Many students, particularly Scholastic and Varsity students, don’t see themselves as “academic” students; that is, they don’t see themselves as particularly “good” at school. In our culture, we tend to conflate “intelligence” and grades. Many times, poor grades simply reflect a lack of effort or interest instead of an inability to learn – but students don’t always see the distinction. Decathlon can spark academic interest in students who don’t fit the traditional Honors/A-student model and inspire them to push themselves in other fields.

So there are a lot of reasons to do Academic Decathlon. Central to all of these reasons, though, is one last point: **creating lifelong learners**. One of the best things that students can get out of Academic Decathlon is **learning how to learn**, and even better than that **is learning how to learn well**. If we can teach students how to learn in an effective (and maybe even enjoyable) manner, they won’t just get higher scores in competitions; they’ll make learning a part of their everyday lives. In this presentation, I’ll focus on ways to promote efficient, effective study techniques that you can use in Decathlon and throughout the rest of their lives.



# + Overall Structure



- Walkthrough of tackling Decathlon
  - Reading USAD
  - Google (or a Curriculum Guide!) is your friend
  - No-Pressure Quizzes & Tests
  - Review, Review, Review (but the right way)
- Performance Events
- Key Do's and Don'ts of Decathlon
- Q&A

# + The First Read



## ■ Individual Reading

- NO popcorn, reading out loud, reading as a group, etc.
- Easy to “hide” and zone out

## ■ Break it up

- 3-4 pages at a time
- At the end of each column, ask yourself: what did this just say? What was the point?

## ■ NO highlighting or annotating

- Underlining words/events/concepts you don't know is OK

## ■ NO distractions: phone, laptop, music with words

## ■ Should be done at home, before meeting

# + Go For a Walk



# + The Second Read



- Google is your friend
  - Same pages, but Google as you go
  - Look up: unfamiliar words, concepts, events
- Focus on the big picture and main ideas
  - Details come later!
  - Annotate main ideas
  - Key questions: **Why should I care? What was the point?**
- Or use a Curriculum Guide
- Again, NO highlighting or group work
- **Should also be done at home, before meeting**



# + Short Quiz



- Quick review using “right there” questions
  - Partners can ask each other simple questions
  - Or use Curriculum Guide quizzes
- Quizzes need to be:
  - **Ungraded** (no pressure)
  - **Open-book**
  - **SHORT** (5-8 questions, 10 minutes max)
  - **No more than 2 people**
  - **Recall-based**
- **Beginning of class/club**



# Recall vs. Recognition



## ■ Recognition: You can “see” the answer

- Multiple-choice
- Non-interactive flashcards
- Good for assessment
- Not good for learning

“Recognition” reviews (like multiple-choice tests) are much less effective at teaching and helping students retain material than . . .

## ■ Recall: You need to come up with the answer

- Non-multiple-choice
- Anki/Quizlet flashcards
- Essay questions
- Good for assessment
- **Great for learning**

“Recall” based activities, or tests/exercises that force students to come up with answers on their own. By creating an atmosphere where students actively remember and talk about the material in the packets, you can do a lot of good for your team.

# + Group Discussion



- Take 1-2 big picture questions
- Divide into small groups (2-3 people) and construct an answer
  - **Thesis** (*an argument*)
  - **Key supporting details** (*facts*)
  - 5-10 minutes
- Then talk as a group
- Essay questions make a great source
  - Also essay practice

# + Anki Practice



- How many of you know who this is?



Most of you are probably familiar with Ken Jennings, the longest-tenured Jeopardy champion.

# + Anki Practice



## ■ How about this person?

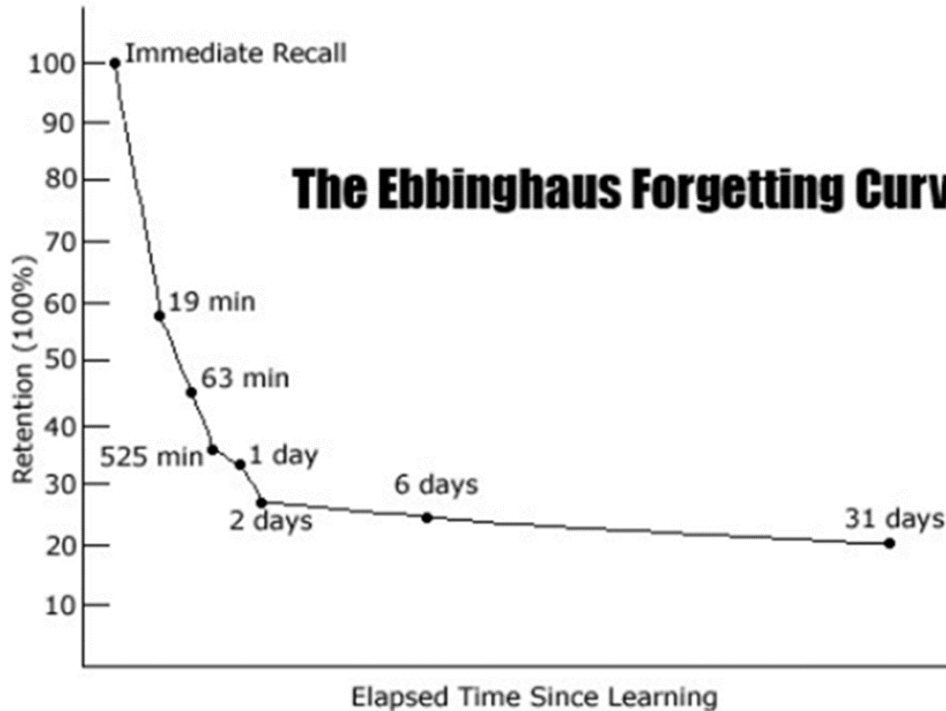


This is Brad Rutter, who, despite being less famous than Ken, has actually won more total money on Jeopardy. You might remember that the two of them competed a few years ago against IBM's Watson computer.

How did these two men become so excellent at trivia? They both prepared using a very specific learning model called **spaced-repetition**, which takes advantage of a psychology principle called **Ebbinghaus' forgetting curve**.

# + Anki Practice

## The Ebbinghaus Forgetting Curve



Essentially, this curve highlights how much information we recall after we have learned it and then not thought about for a certain amount of time. You can see on this graph that memory drops off rather quickly after just a few hours, then falls to essentially zero just a few days later. However, the most interesting part of the study shows what happens when information is reviewed.

If the same information is presented a few days later, recall spikes afterward – **and stays much higher than it was in the past**. This benefit *only* occurs if time is given between repetitions; repeating facts with no break essentially has no effect. If you repeat information periodically, then long-term retention increases dramatically.

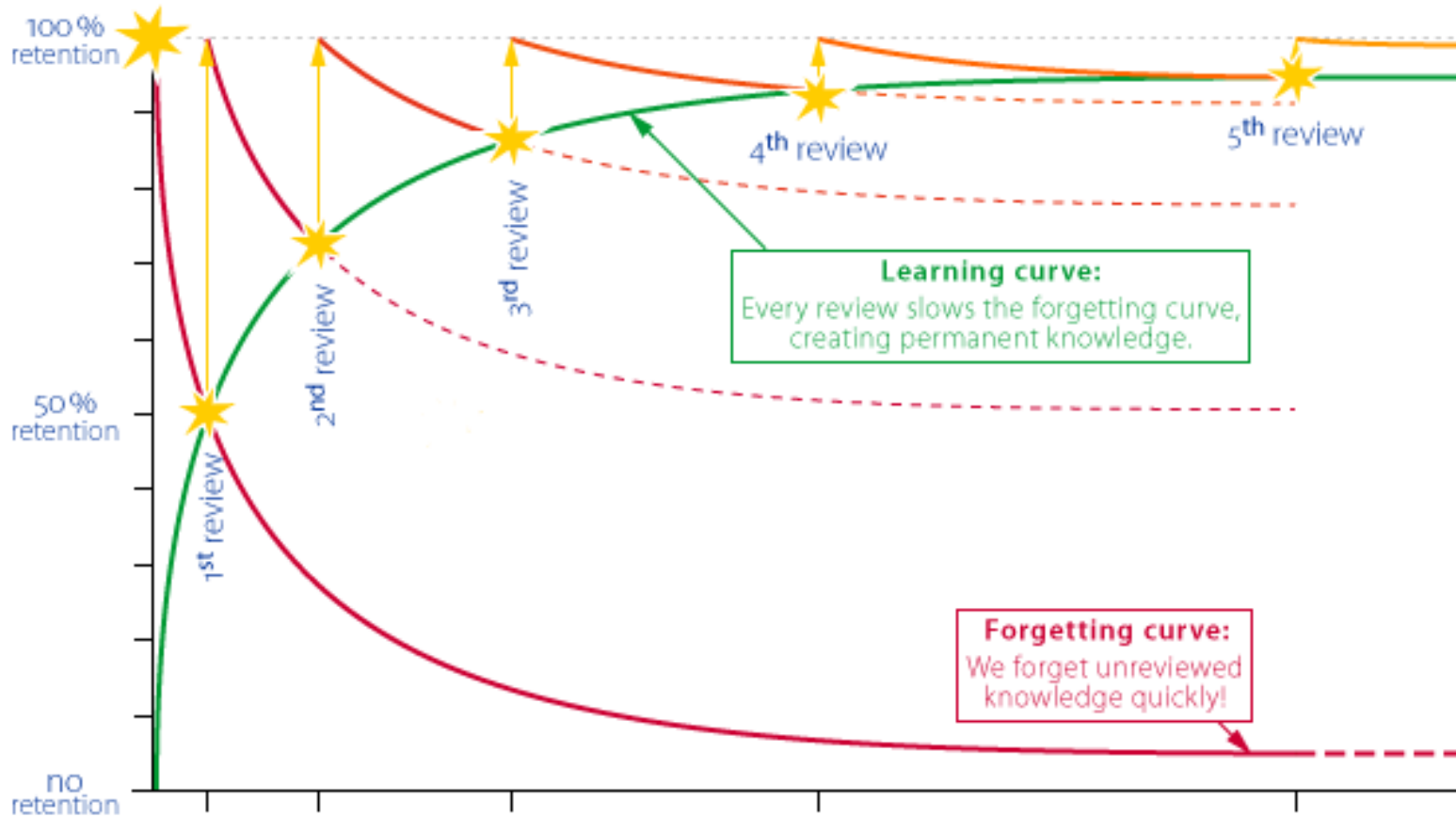



# + Anki Practice



## Why spaced review works

[www.LearnThat.org](http://www.LearnThat.org), a LearnThat Foundation project



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- There is widely-available (and free!) software that your teams can use to capture the benefits of this model. Brad Rutter actually used Anki, which is my personal favorite.
  - This program is like flashcards on steroids. It has a list of questions and will prompt you for a response – which you need to type in (making the questions recall, not recognition, reviews). The correct answer is then displayed, along with an answer explanation and any other information you want to provide, and then you can choose how “well” you knew that question. This is key: by telling the program what you know and don’t know, it will display cards you know less well more frequently, while pushing off facts that you know well.
  - In other words, it’s Ebbinghaus’ forgetting curve put into action: the program will create a study schedule that periodically shows you “old facts” based on how well you remember them. The more times you see a card, and the better you know it, the longer the wait will be. The program is also available for all major devices, including mobile, and syncs your data across all devices – so you can review anywhere.
  - I used Anki extensively the year I broke 9,000 points, and my team used it as well; I strongly recommend you download and use the program with your own team. The software is free and your students can make their own cards and review with them; this would be an excellent way to study.
  - If you don’t want to use Anki, Quizlet is a good alternative, although it won’t create this study schedule for you.





# Do's/Don'ts: A Summary



## DON'T

- Simply reread
- Read straight through many pages
- Highlight and underline everything
- Circle key words
- Read out loud
- Use only recognition tests

## DO

- Review with Recall/Anki
- Take many mini-tests
- Highlight **main ideas** *after* reading for the first time
- Annotate main ideas of paragraphs in margin
- Discuss as a group after individual reading (essays)

# + Performance Events



- **Essay: Your judges have (probably) not read the book!**
  - Don't be concerned about being "correct"; focus on being **coherent**
  - Stay clear and tie everything back to an argument
  - Outline for 5-7 minutes first; pick 2-4 key points (central paragraphs)
  - One strategy: **write your thesis last**
- **Speech: It's not an essay**
  - Need to simplify sentences and leave natural pauses
  - Don't be afraid to use silence
  - **Don't structure it like a pronged essay**

# + Performance Events



- **Interview: Have your “stories” ready**
  - Look up lists of typical interview questions and try to envision answers
  - Focus on the big ideas when reading materials
  - Like essay, don't worry about facts

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