

Gamifying primary students' reading process through an online battle platform: Factors for success and obstacles to overcome

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Reading Battle - Online gamified learning battle platform

- Since Feb 2014
- 70+ schools

Reading Battle's Homepage - equiz.cite.hku.hk



Trial accounts

Username: test1

Password: password

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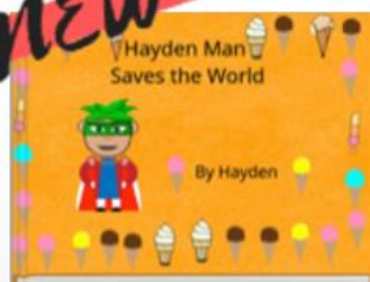
Username: test100

Password: password



e-books

new



Hayden Man Saves The World

Author: 梁睿哲及朱啟華博士團隊

Publisher: Academy 22

Book ID: 2201

Reading Level:



62 vote(s)

Start Battle



Read e-book

new



拯救公主記

Author: 黃梓晴及朱啟華博士團隊

Publisher: Academy 22

Book ID: 3020

Reading Level:



246 vote(s)

Start Battle



Read e-book

new



善良的怪物王子

Author: 吳日軒及朱啟華博士團隊

Publisher: Academy 22

Book ID: 3013

Reading Level:



256 vote(s)

Start Battle



Read e-book

new



Best Friends

Author: 黃心榆及朱啟華博士團隊

Publisher: Academy 22

Book ID: 2206

Reading Level:



175 vote(s)

Start Battle



Read e-book

new



Princess Savers

Author: 蕭樂嬌及朱啟華博士團隊

Publisher: Academy 22

Book ID: 2205

Reading Level:



54 vote(s)

Start Battle



Read e-book

new



Nice Jelly

Author: 葉証充及朱啟華博士團隊

Publisher: Academy 22

Book ID: 2204

Reading Level:



217 vote(s)

Start Battle



Read e-book



"Hayden Man Saves the World" 🔊



a RB (reading battle)book.
the book talks about a retired superhero called Hayden Man
saved the world from the bad virus of V-2022 and Dr.Virus,the
greatest bad guy of all times .
(42 pages)

Privacy level: FAMILY
Teacher can see this book

👁 572 reads ★ 5 fans



First Battle

You can try up to 3 battles (Only the highest score counts!). You will lose 10% of the total points in the 2nd battle and 20% in the 3rd battle. So please read the book carefully before going for a battle. Within each battle, you can attempt each question up to 2 times. You get half of the points if you get it right the second time.



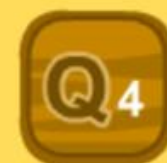
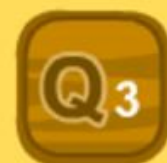
Confirm

You will be invited to rate this book if you score above 70.





Hayden Man Saves The World



Challenging
Question

Challenging
Question

[Information Retrieval]

Who threw the glitter at Dr. Virus ?

- ☐ a. News Reporter
- ☐ b. Dr. Smart
- ☐ c. Police
- ☐ d. Hayden Man

Confirm



Worm Catcher

[Tips of worm catcher](#)



Hayden Man Saves The World



Q2

Q3

Q4

Q5

Q6

Q7

Q8

Q9

Q10

Challenging
Question

Challenging
Question

[Information Retrieval]

Who threw the glitter at Dr. Virus ?

☐ a. News Reporter

☒ b. Dr. Smart



Hint:

P.21-25

☐ c. Police

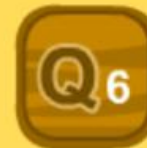
☐ d. Hayden Man

Try Again





Hayden Man Saves The World



Challenging
Question

Challenging
Question

[Information Retrieval]

Who threw the glitter at Dr. Virus ?

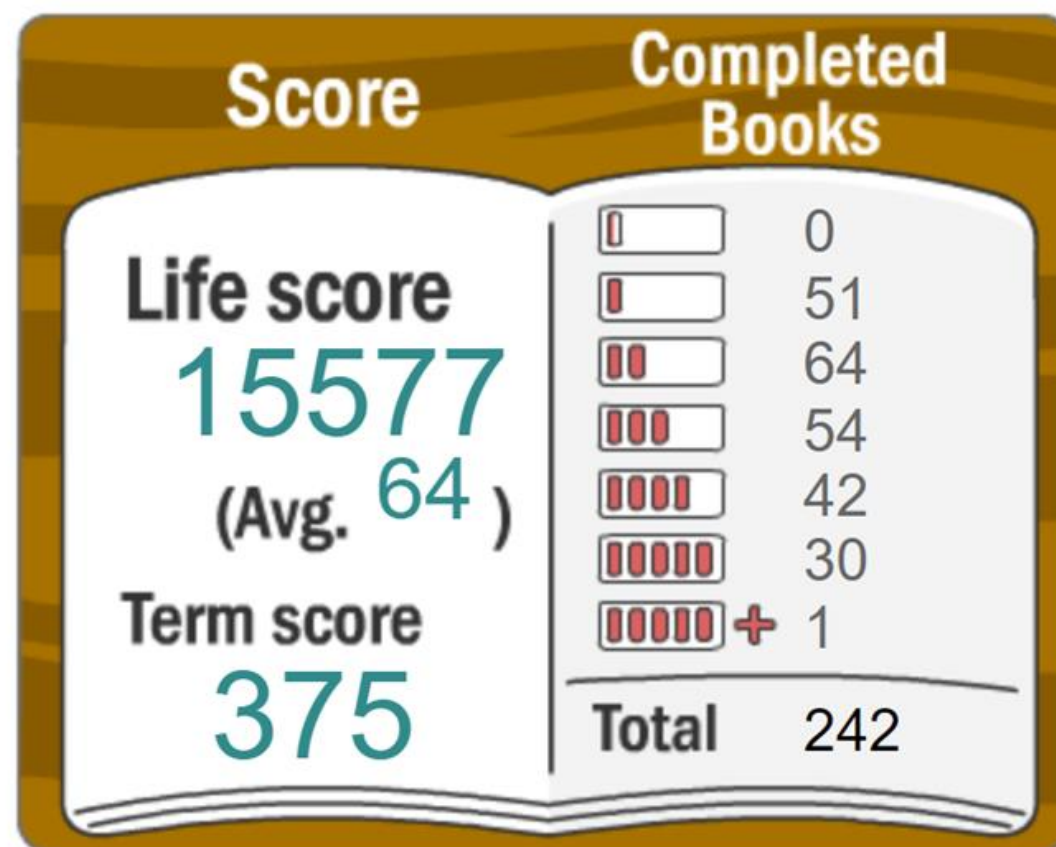
- ☐ a. News Reporter
- ☐ b. Dr. Smart
- ☒ c. Police ✗
- ☐ d. Hayden Man



Explanation:

Hayden Man threw some glitter at Dr. Virus





Details:

Books	Trial Scores			Best Score	School Average	World Average
	1st	2nd	3rd			
大雄的神奇魔法油	<div><div></div></div>	88	Try Again	88	88	86
Nice Jelly	<div><div></div></div>	79	Try Again	79	79	74
暖爐放寒假	<div><div></div></div>	46	Try Again	46	46	71
與龍的友誼	<div><div></div></div>	79	Try Again	79	79	78
王子拯救小王國	<div><div></div></div>	79	83	50	83	79



Term Score:

Top 10 Term score within inter-school form (English and Chinese Books respectively)

Annual awards:

Top 10 Improvement score ranking within inter-school form (English and Chinese Books respectively)



Inter-school Form Life Score Ranking

Term Score Ranking

Improvement Score Ranking

(First 200 users with average score ≥ 80 will be listed)

All school forms

All classes

Inter-school Form

without average score < 80

All books

	Name	Class	School	Total score	No. of books	Avg score
1	CHAN KING SUN	P3D	Yaumati Catholic Primary School (Hoi Wang Road)	52086	546	95
2	TSE HOI TUNG		Lam Tin Methodist Primary School	48877	503	97
3	LI YI	P3A	Lam Tin Methodist Primary School	46562	505	92
4	LI HOI CHING		Lam Tin Methodist Primary School	45626	493	93
5	TANG TSZ KWAN	P3C	King Lam Catholic Primary School	43393	466	93
6	YAN HOI CHING		Sacred Heart Canossian School	43042	446	97
7	CHUNG PUI CHI	P5E	PLK Fung Ching Memorial Primary School	42615	450	95

Reading Battle enhances a student's reading interest, habit and abilities. Also enhances writing abilities.



<https://youtu.be/Zhsa1dFamzI?t=150>

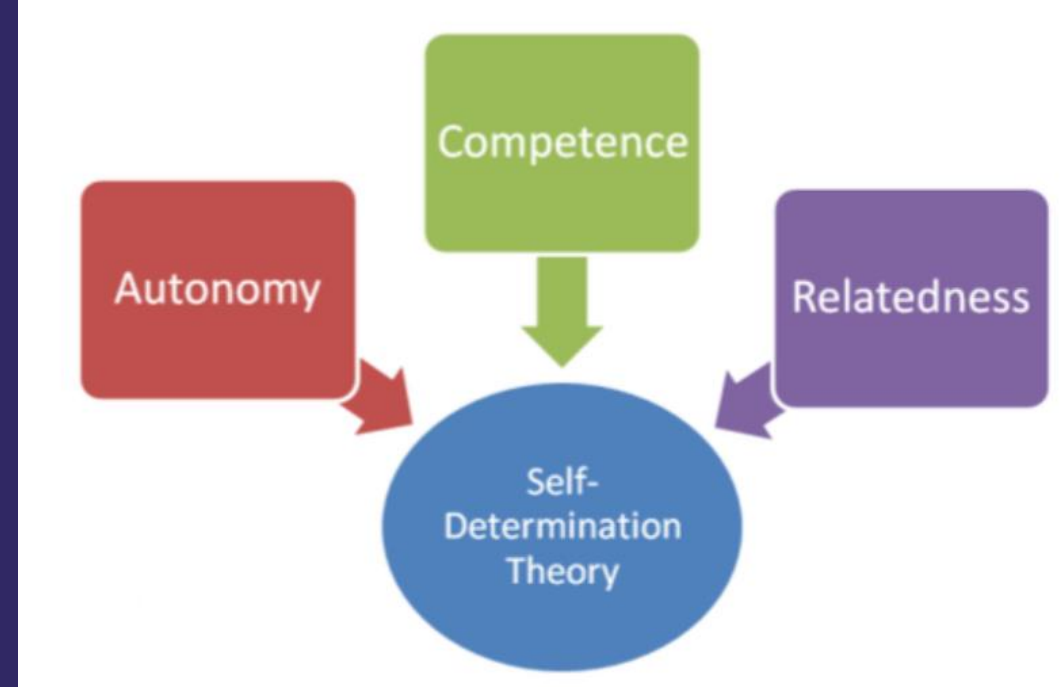
A student caught up with 4 year of “reading curriculum” in 5 months!



<https://youtu.be/SyLWg0CA-pY?t=329>

Source:
<https://www.youtube.com/watch?v=p9eACNISums>

Why “Reading Battle” works like magic? - 1

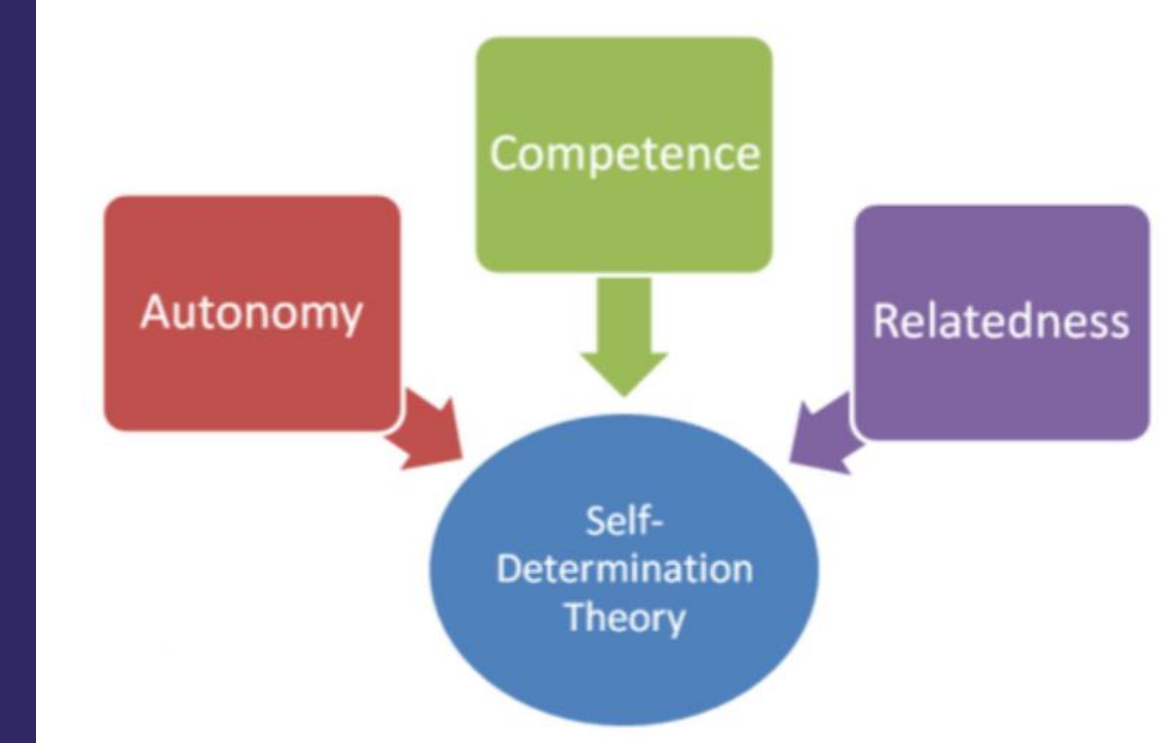


Source: https://en.wikipedia.org/wiki/Self-determination_theory

- It fulfills human's 3 essential psychological needs: autonomy, competence, and relatedness (Deci & Ryan, 2012).
 - Autonomy refers to a feeling of being in control of or self-determination in activities.
 - Competence implies a need to improve abilities or to develop a feeling of mastery. Pink (2009) described “mastery” as a desire for “getting better at something (e.g., performance, competence, skills, time)”.
 - Relatedness is defined as a social need to connect with others and a sense of belongingness.

Li, X., & Chu, S. K. W. (2020). Exploring the effects of gamification pedagogy on children's reading: a mixed-method study on academic performance, reading-related mentality and behaviors, and sustainability. *British Journal of Educational Technology* (Accepted).

Why “Reading Battle” works like magic? - 2



- Li, X., & Chu, S. K. W. (2020). Exploring the effects of gamification pedagogy on children’s reading: a mixed-method study on academic performance, reading-related mentality and behaviors, and sustainability. British Journal of Educational Technology (Accepted).
 - Contains 3 studies
 - Study 2 addressed the question of how students/parents/teachers perceive students’ motivation and gaining in the use of the gamified platform.

Why “Reading Battle” works like magic?

- 3

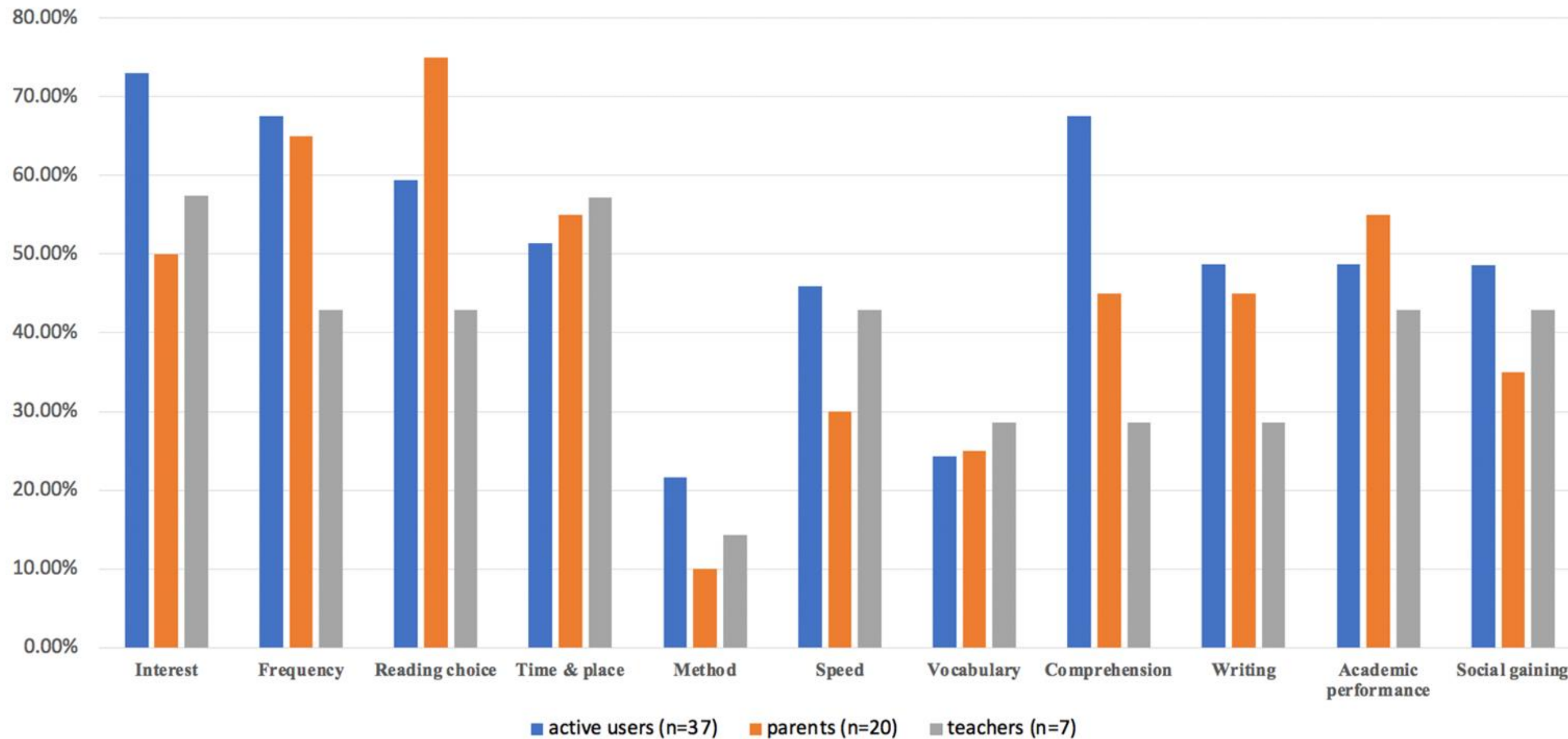
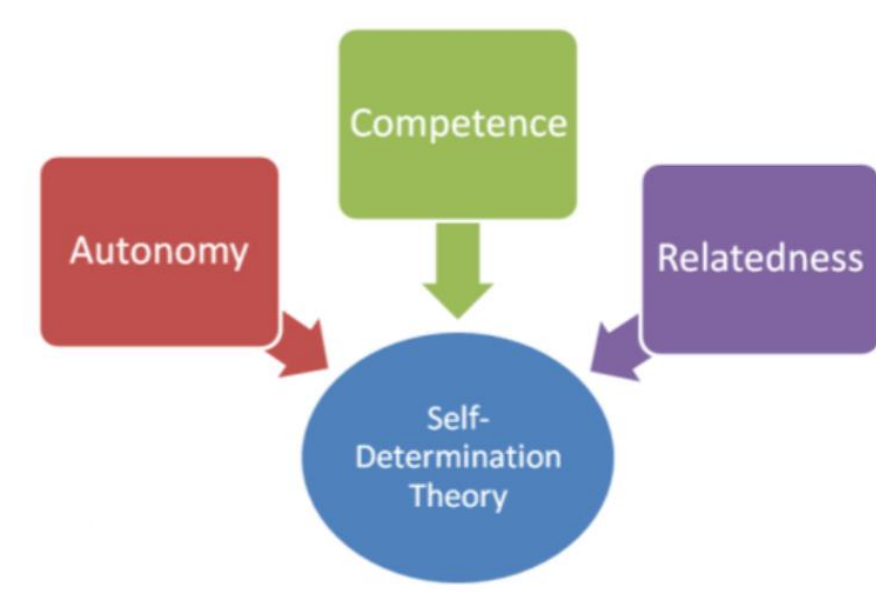
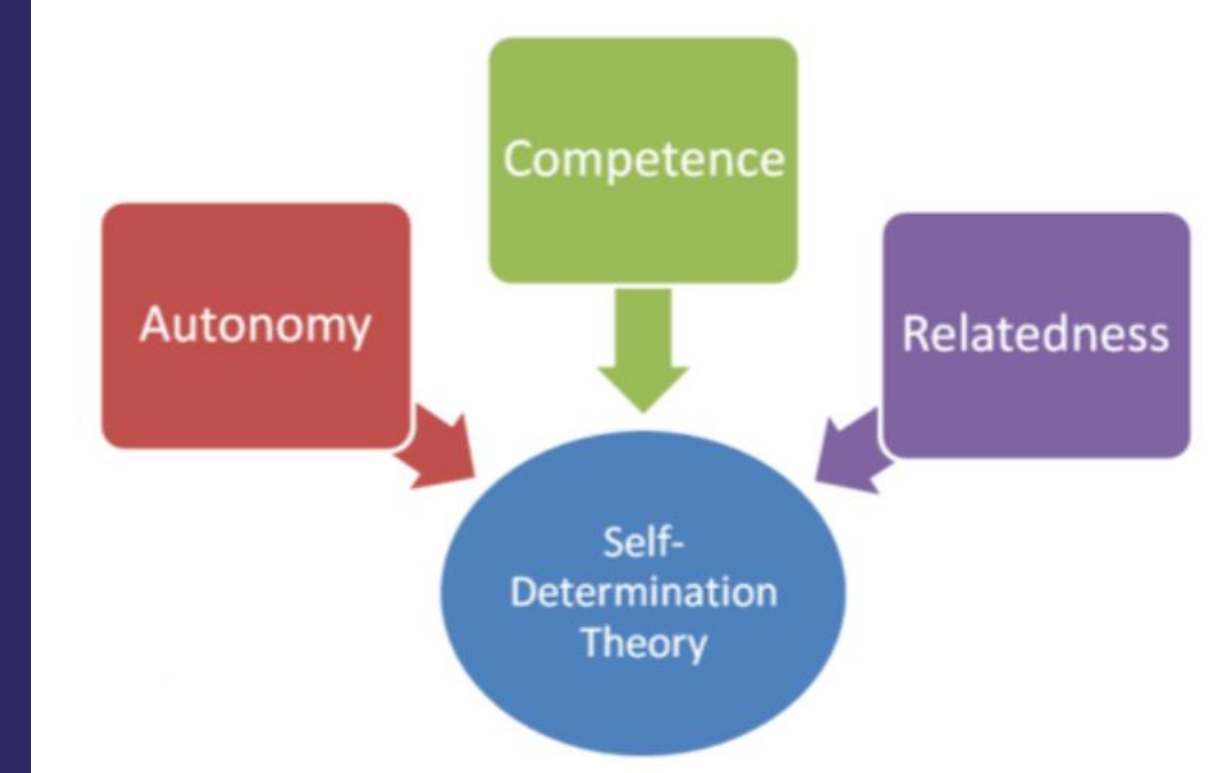


Figure 4. Coding results of interviewees' perceived effects of RB in Study 2

Why “Reading Battle” works like magic? - 4



- Student Gordon reported, his reading choices became richer
 - as RB illustrated the battles based on 11 genres of books.
 - This satisfies which element in SDT?
- Through reading books and completing book-battles, students strengthened their reading abilities in terms of reading comprehension, vocabulary, general knowledge & writing too.
 - This satisfies which element in SDT?
- Students' social interaction was enhanced during the use of RB according to the responses.
- 48.64% of the students and 35.00% of the parents mentioned social activities/elements during children's use of RB.
- Parent Mary stated that she often talked about RB with her son, ... guided him on figuring out answers to some challenging questions. Her son became more active in talking about what he read..
- Another parent reported that her two daughters often read books and finished battles on RB together.
- Teacher Nancy observed that some children liked to share print books and discussed the content of books and their experience of RB with classmates.

Student Wong's sharing - 1

- 大家好，我係王梓樂。我宜家係順利天主教中學就讀中三。
- 我大概係小二嘅時候開始接觸到reading battle。其實一開始我都唔係好鍾意做。
- 所以我係小二至小三呢兩年入面都係hea住做。
- 但係去到我小四嘅時候，我對reading battle嘅睇法開始有啲改變。
- 我之前一直都覺得reading battle，咪同其他個啲扮到好似遊戲咁，
- 懶好玩嘅網上練習一樣。同個啲又悶又無聊嘅功課根本就無分別。
- 但係上到小四，我開始發現reading battle唔淨止係咁。佢係一個非常完善，
- 具有好大自由度嘅平台。而係當中最吸引到我嘅，就係呢種自由度。
- 當其他平台會限制你去睇某一片文章，或者某一本書嘅時候，reading battle佢俾我有各種唔同嘅選擇。
- 佢嘅系統囊括咗各種唔同類型嘅書，從淺至深嘅都有。



Source:

<https://www.youtube.com/watch?v=p9eACNISums>

Student Wong's sharing - 2



Why is autonomy so important in motivating students to read?

- 咁點解呢樣野，呢種自由度咁重要呢？
- 當你問一個老師，或者你嘅家長，有咩書可以建議俾你睇嘅時候，佢地通常都會答你 [睇呢幾本啦，佢地擺過啲咩獎咩獎] 或者係 [睇呢幾本啦，睇完你啲文筆一定會有進步]。
- 但係其實咁樣對一個未開始對讀書有興趣，甚至係唔鍾意讀書嘅人黎講，係一啲幫助都無，甚至仲會令佢地更加抗拒讀書。而我正正就有過咁嘅經歷，所以我係小四之前，都係極討厭睇書。
- 但係就係因為有reading battle呢個平台，包含咗各式各樣嘅圖書種類俾我地自己去選擇，我終於有機會可以睇我自己鍾意嘅書。

Student Wong started having interest to read, form a good habit (competency)

- 於是我越睇越多，開始睇唔同種類嘅書，開始漸漸培養出對睇書嘅興趣，培養出一個睇書嘅習慣。

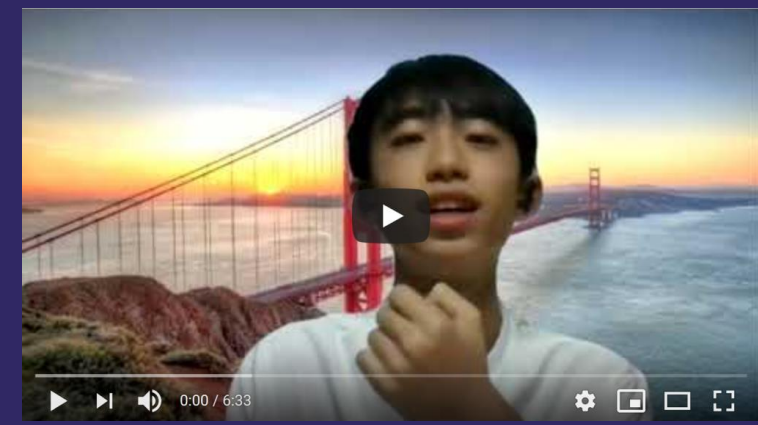
Student Wong's sharing - 3



Relatedness in Reading battle?

- Reading battle上面有一個可以睇到你同同學嘅分數排名嘅榜。我仲記得我小四至小五個段時間好鍾意去追人地嘅分數，當我追到人地嘅分數嘅時候，我就會獲得好大嘅成就感，呢個亦都係其中一個我鍾意玩reading battle嘅原因。
- 就係因為咁，我日日做完功課就睇書，跟住就上網做練習。係我最後仲可以做reading battle嘅個幾個月，我甚至係睇到唔夠書睇，逼住要揀啲勁深嘅書黎睇。
- 而係個兩年入面，我嘅學業成績有一個極大嘅進步，無論係係閱讀定係寫作方面。

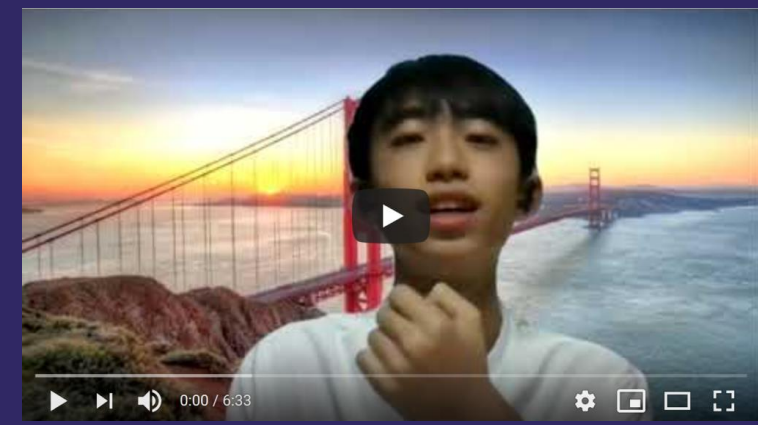
Student Wong's sharing - 4



How Reading battle influences the student's English/Chinese as a secondary student?

- 講咗咁耐我小學嘅經歷，係時候講下我最近呢三年中學嘅經歷。
- 其實我係中一至到中二入面，因為我識咗一班鍾意打機嘅朋友，導致我個兩年入面都淨係掛住打機，特別係中一下學期嘅時候，我係個兩年入面係完全無自發咁睇過任何一本書。
- 所以我其實係由中三先開始睇番書。
- 即使係咁，憑著係玩reading battle呢段期間所培養出嘅寫作能力和我呢一年黎嘅努力，我成功咁攞住中文全級第一，仲成為咗校刊編輯。
- 另外，憑著係過去咁多年，由reading battle睇書開始建立嘅語感，特別係英文，令到我咁多年係中學嘅英文成績每次都係頭10%。

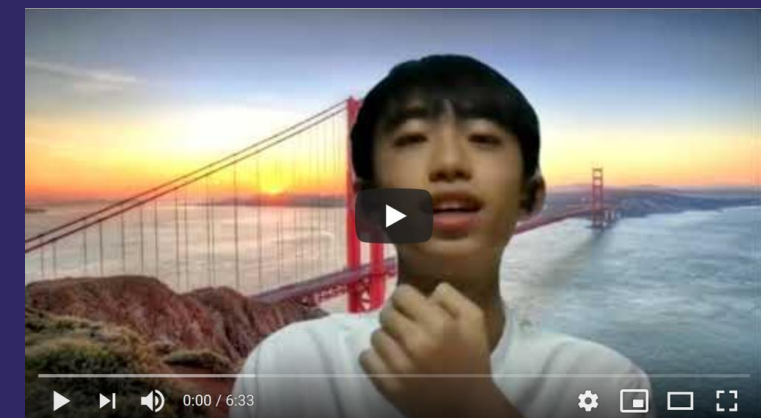
Student Wong's sharing - 5



Reading Battle can help students develop creativity

- 而我認為閱讀所帶俾我嘅好處唔淨止係體現係成績上面。
- 因為我最近好鍾意睇中文嘅散文同英文嘅詩，我發現我嘅思維變得無咁狹窄，變得更有創意。有一啲好新奇，好有創意，甚至係無厘頭嘅idea，會突然出現係我個腦入面。
- 有啲人可能會問，咁變得更加有創意無用架，佢遞時唔會幫到你。但係現實就係喺咁好相反。宜家係外國，甚至係香港都開始提倡 "Entrepreneurial spirit" 創業精神。而其中一樣要求嘅野，就係創意。
- 就以我自己為例，閱讀對我宜家參加緊MIT嘅programme有幫助，而係MIT嘅呢個programme係同寫作能力同埋閱讀能力完全無關。

Student Wong's sharing - 6



Reading is not just for enhancing academic performance

- 其實閱讀對我地嘅好處好多，只係我地可能未發現到。所以永遠都唔好將自己困係 [睇書就係為咗增進自己學業成績] 同埋 [要睇啲所謂有營養嘅書先至好] 嘅傳統概念入面，盡量去睇多啲唔同種類嘅書，善用reading battle呢個平台去加深你對書本內容嘅了解。
- 好啦，我今日要講嘅野就係咁多。我最後想係呢度多謝朱博士同佢嘅團隊，設計出一個咁完善嘅平台，培養出我對閱讀嘅興趣；多謝Miss Chan係我小學度推廣reading battle，如果之前無接觸到reading battle，我就唔會鍾意睇書，亦都唔會有今日咁好嘅發展。我今日嘅分享就到呢度，多謝大家。

Why these kinds of success only
happen to certain schools?

**Factors for success and
obstacles to overcome?**



Factors for success

Data was collected from focus group and individual interviews with teachers, parents, librarians and students



Intrinsic motivation

- Sense of achievement
 - Self-control
 - Curiosity
- Autonomy to read and learn



Accuracy by Question Type ⓘ	
Information Retrieval	100%
Making Inferences	100%
Integrate Ideas and Making Interpretation	100%
Evaluation	100%



Extrinsic motivation

- Completion of the reading battles
- Reaching a higher ranking on the leaderboards
- Communicating and competing with peers
- Obtaining more badges, rewards and certificates

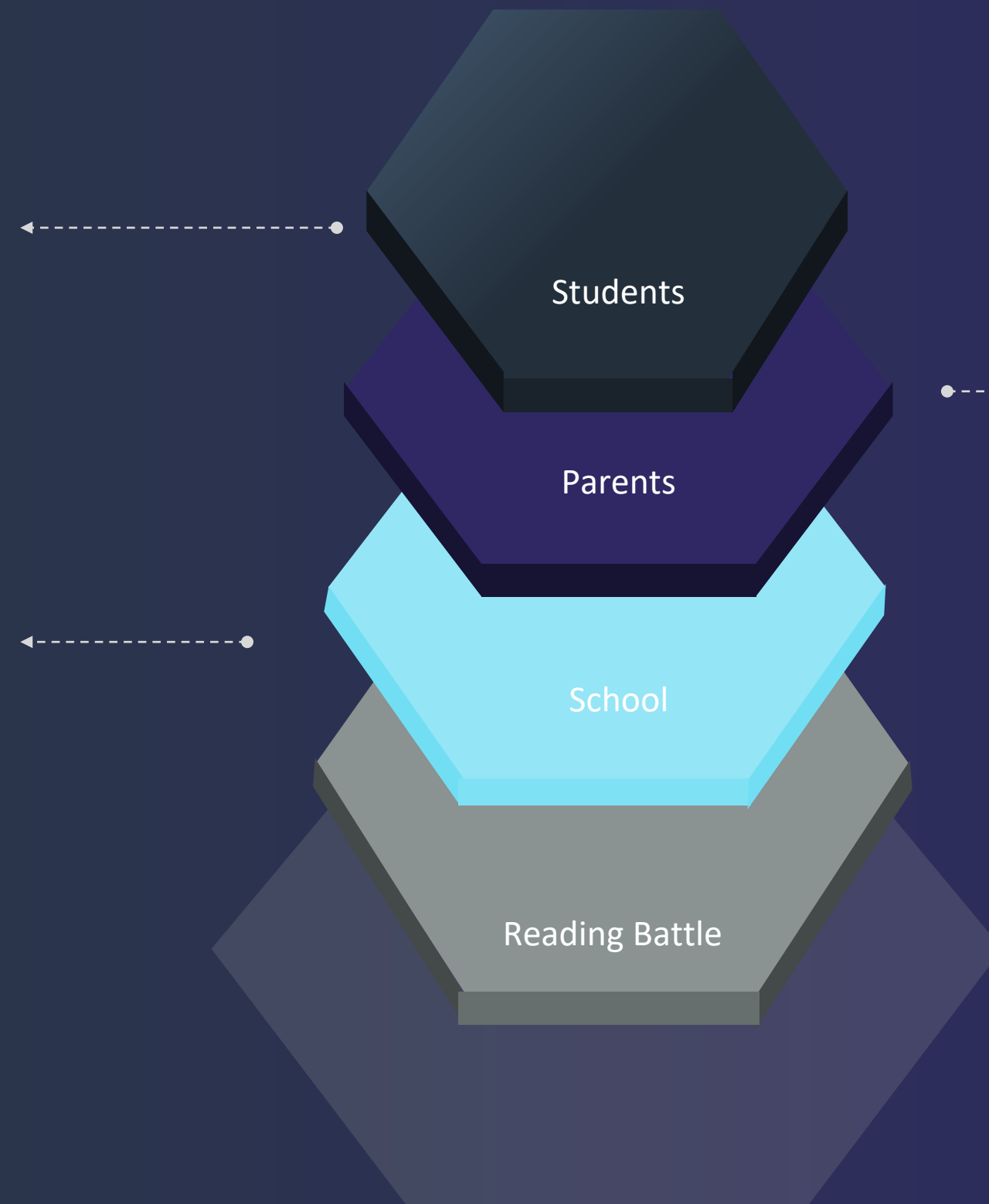
OBSTACLES TO OVERCOME

Students' busy schedules

- A difficult obstacle to overcome
- If students can experience the joy of reading + parents can understand the importance of developing reading at a young age => likely that more free time from students' schedules would be made available for enjoyable reading

Financial concerns

- School support in increasing the number of tablets and computers available for student use during recess can assist students with poor financial backgrounds



Parents' restrictions on tablet/ computer use

- Parents imposed restrictions on children's electronics usage regarding RB or reading-related activities

Lack of interest

- Students feel exhaustion of suitable books/ running out of battles to complete



GOOD PRACTICES REPORT

Good practices report

After gathering the factors of success and obstacles to overcome, the project team shared the “*secret of success*” – Good practices report. It will facilitate the knowledge transfer between top-performance schools and low-performance schools, where the success factors of the former were shared to the latter. The report consists of four sections.

GOOD PRACTICES REPORT

SCHOOL

HOME

Library and school website design

- Highlight RB activities and books

Principal and other subject teachers

- Provide support and cooperation for teacher-librarian

Students

- Increase motivation and autonomy of RB use

Parents

- Decisive role regarding students' use at home

1. Library design

- Prepare dedicated library shelf for RB books
- Post RB leaderboard results monthly in library as encouragement



Nature of event

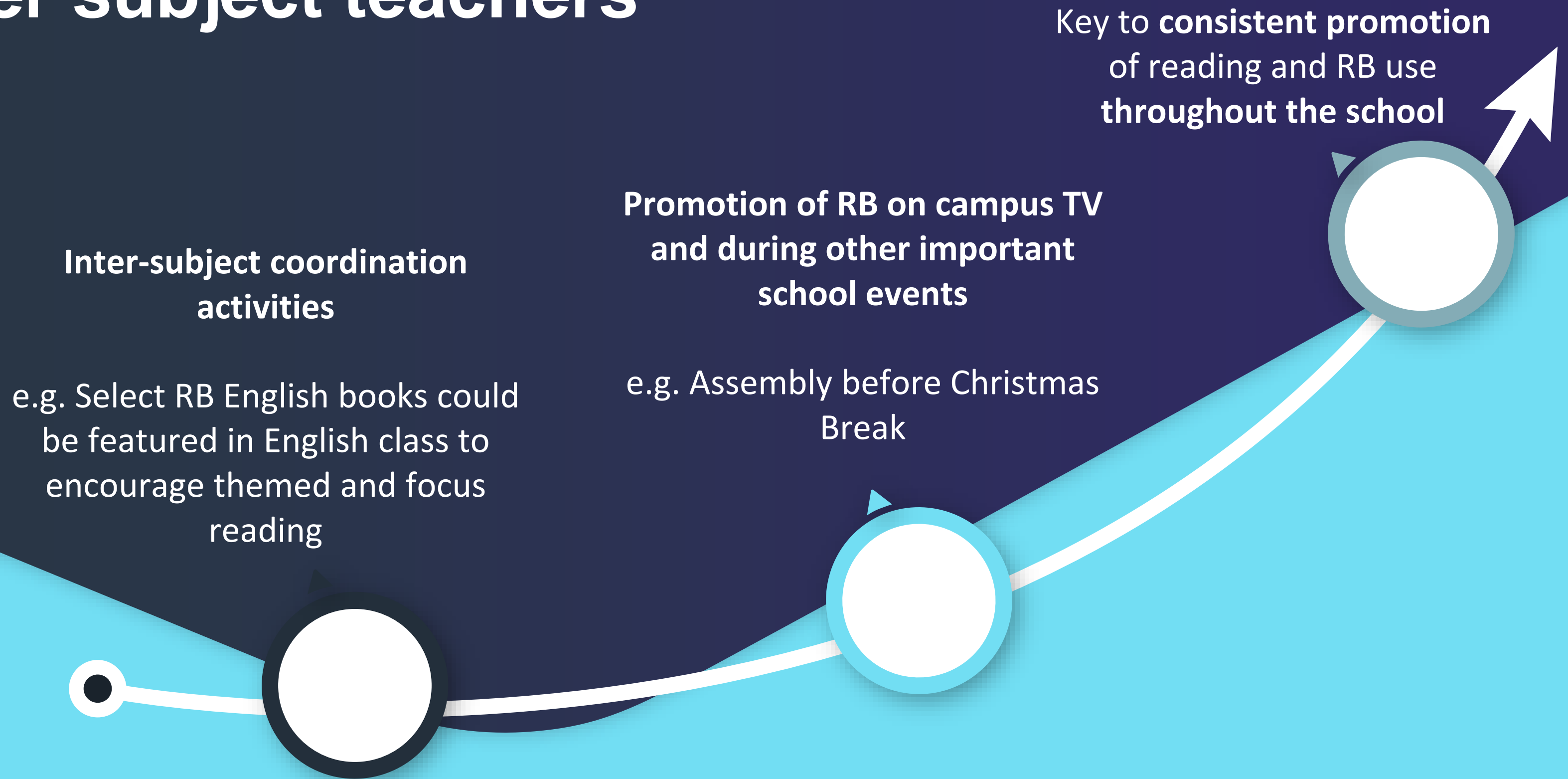
Habit-forming



Tips

Make use of labeling to indicate books' difficulty level

2. Support from Principal and other subject teachers



3. Student targeted events

1. Merge RB into school library record schemes

- Include RB book records to count towards library leaderboards and reward scheme

2. Incorporate RB achievements into school merits scheme

- RB achievements of 80 marks or above could be exchanged for a 'tick' in student handbooks, further accumulation could result in a 'merit' in the report card

3. Count RB achievements toward large year-end event

- Students reaching a certain level of RB participation (e.g. over 50 books) in a school year may participate in a 'party' (e.g. with free flow of ice-cream)



Nature of event

Accumulative
Merit-based



Tip

Make use of RB 'report' feature to generate event results

4. Parent-targeted events

Parent seminar

Sample topics:

- Parent- child reading through RB
- Use of public library resources

Parent announcements

Notices on

- RB initialization in school
- RB-related activities

Nature of event

- Parents-targeted

Aims

- Muster parent support for child's RB use at home
- Help parents understand the benefits of reading and RB usage

Tips

- Remind parents of principles of enjoyment and autonomy