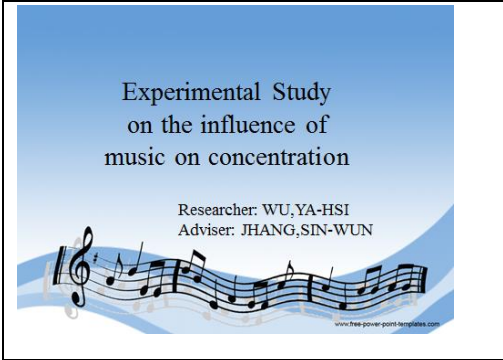

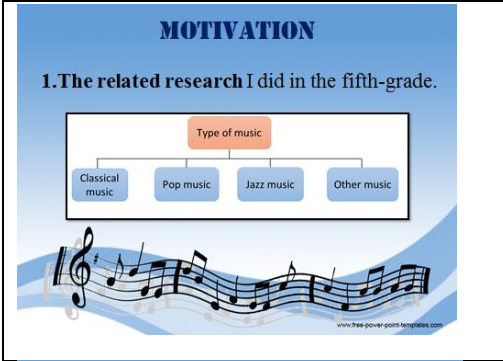
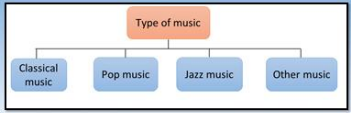



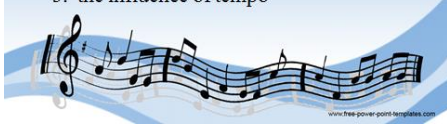





不同音樂對專注力影響之實驗研究

研究者：吳亞希 (Wu, Ya-Hsi)

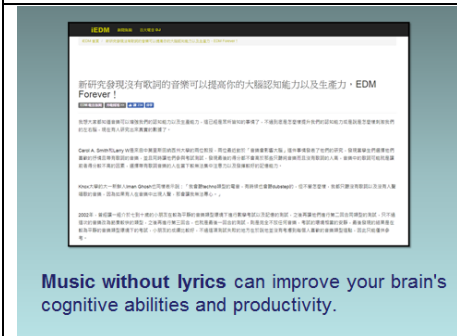
指導者：張馨文老師 (Jhang, Sin-Wun)

 <p>Experimental Study on the influence of music on concentration</p> <p>Researcher: WU, YA-HSI Adviser: JHANG, SIN-WUN</p>	<p>Good afternoon, everyone. I am WU, YA-HIS This is my Study Experimental Study on the influence of music on concentration My Adviser: JHANG, SIN-WUN</p>
 <p>Research Background</p> <p>The Research about Fifth-Grade Students' Preference and Benefit for Music</p> <p>Researcher: WU, YA-HSI Adviser: JHANG, SIN-WUN</p>	<p>Research Background The Research about Fifth-Grade Students' Preference and Benefit for Music</p>
 <p>MOTIVATION</p> <p>1. The related research I did in the fifth-grade.</p>  	<p>Introduction Motivation</p> <p>1. From last study I learned that most students like to listen to music while writing homework and they liked pop music most.</p>
 <p>MOTIVATION</p> <p>2. reports about benefits of music for concentration while doing homework</p> <p>3. concentration Influenced by what kind of music</p> 	<p>2. I've heard reports about benefit of music for concentration while doing homework.</p> <p>3. I want to know Students' Concentration Influenced by what kind of music by experiment.</p>

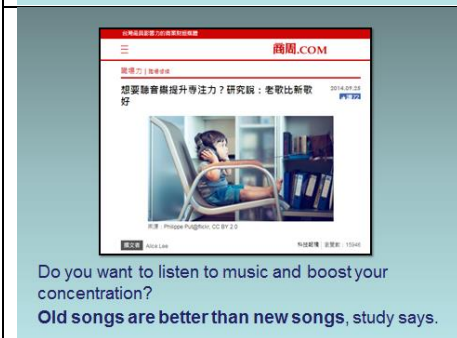
<p style="text-align: center;">PURPOSE</p> <ol style="list-style-type: none"> 1. the influence of the type of music 2. the influence of lyrics 3. the influence of tempo 	<p>Introduction -Purpose</p> <ol style="list-style-type: none"> 1.Understanding the influence of the type of music on the correct rate of math answers for sixth grade students 2.the influence of lyrics 3.the influence of tempo
<p style="text-align: center;">METHODOLOGY</p> <p>Experimental Study Research objects : Fourteen students of sixth grade in Minsheng elementary school</p> 	<p>Methodology Experimental Study</p> <p>Research objects : Fourteen students of sixth grade in Minsheng elementary school</p>
<p style="text-align: center;">LITERATURE REVIEW</p> 	<p>Literature review</p>
<p style="text-align: center;">1. INDEPENDENT RESEARCH</p> <p>Minsheng elementary school gifted class 27th [CHIN,YI-FAN]</p> 	<p>1.Independent research Minsheng elementary school gifted class 27th [CHIN,YI-FAN]</p>
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">研究者：金以凡 指導老師：王麗儀老師</p> <p>壹、 緒論</p> <p>一、研究動機 因為我很喜歡聽音樂，因此也會常一邊聽音樂一邊寫功課，但是從沒想過這些舉動是否會讓工作效率降低。不過自從有一次，我忽然想起班上的其他同學，他們都說那樣會讓人無法專心。而我之前也看過有個人不能一心多用的電視節目，因此我就很好奇，這是真的嗎?那麼，哪一種歌會影響比較多呢?所以我決定利用這次的研究機會，找出聆聽不同種類的歌曲對數學能力的影響。</p> <p>二、研究目的 (一)了解旋律的快慢對音樂與六年級學生數學能力的影響。 (二)了解歌詞的有無對音樂與六年級學生數學能力的影響。</p> </div> <p style="text-align: center;">Experimental Study about the influence on listening to music on mathematical ability</p>	<p>The research is about the influence on listening to music on mathematical ability for 6th-grade students in Minsheng elementary school. It has little influence .</p>



2. New research findings



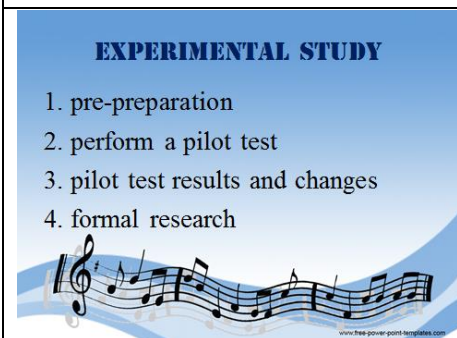
Music without lyrics can improve your brain's cognitive abilities and productivity.
 Pure music without lyrics can make students have a better concentration.



Next
Do you want to listen to music and boost your concentration?
Old songs are better than new songs, study says.
 the classical music of the Baroque period can best improve the productivity for the work



Research Methodology and steps



Experimental Study

1. pre-preparation
2. perform a pilot test
3. pilot test results and changes
4. formal research

SOURCE OF THE TEST QUESTIONS

http://www.emath.math.ncu.edu.tw/ie_school/Platform/Paper/paper_list.php

Source of the test questions
 From One grade to six grade
 It consists of many kinds of Arithmetic

音樂對專注力影響之正式題目(三)

這道題是為了探討音樂對專注力影響的正式題目和說明...
 藉此引導學生對專注力的影響，請您協助完成...
 若有任何建議請與研究小組，不吝賜教您的個人資料，請放心作客。
 研究員：音樂與六年級學生專注力
 調查日期：2018.12.1

正式資料
 六年級 日期: 2018

一、選擇題

1. () $26779 + 472706 - 38 - 2746 =$
 Ⓐ 36473 Ⓑ 36474 Ⓒ 36475 Ⓓ 36477

2. () $28.82 \times (2.1 + 0.7) =$
 Ⓐ 76.46 Ⓑ 86.36 Ⓒ 86.46 Ⓓ 86.47

二、填充題

1. $2683 - 7 + 2215 - 7 + 1220 - 7 =$
 $= (2683 + 2215 + 1220) - 7 =$
 $= \underline{\hspace{2cm}}$

2. $70.84 - (9.6 - 7) - 32.57 = 28.87$ ，則 $7 = \underline{\hspace{2cm}}$

Formal research~ Math Question

Example of **formal research**~ Math Question_

Experimental Session

	Hypothesis 1st		Hypothesis 2nd		Hypothesis 3rd	
Session	1st	2nd	2nd	4th	1st	3rd

Experimental Session
 A total of four session belong to three hypotheses

Music Track Table

Hypothesis	1st.1	3rd.1	1st.2	2nd.1
Music	Beethoven Sonata No. 23 《enthusiasm》 third movement		POP Songs Floating to the north (piano)	

There are 4 music tracks.
 Beethoven sonata No.23
 <enthusiasm> third movement
 POP Songs_ Floating to the north(piano)

Music Track Table

Hypothesis	3rd.2	2nd.2
Music	Beethoven Symphony No. 5 《destiny》 second movement	POP Songs Floating to the north (original with vocal)

Beethoven Symphony No. 5 <destiny>
 second movement
 POP Songs_ Floating to the north
 (original with vocal)


RESULTS



Results

HYPOTHESIS 1ST

The math answers are more accurate while listening to classical music than listening to pop music.



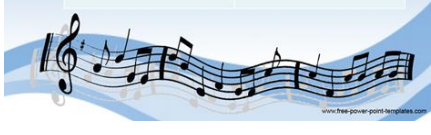
Hypothesis 1st

The math answers are more accurate while listening to classical music than listening to pop music.

OUTCOMES OF HYPOTHESIS 1ST

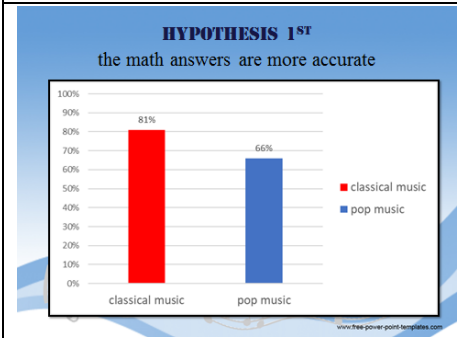
the math answers are more accurate

classical music	pop music
YES <input checked="" type="checkbox"/>	NO <input checked="" type="checkbox"/>



Outcomes


The math answers are more accurate while listening to classical music .



The correct rate of listening to classical music answers was 81%, while listening to pop music **was 66%**. It is supposed the concentration is better while listening to classical music than listening to pop music.

HYPOTHESIS 2ND

The math answers are more accurate while listening to pop music without lyrics than listening to pop music with lyrics.




Hypothesis 2nd

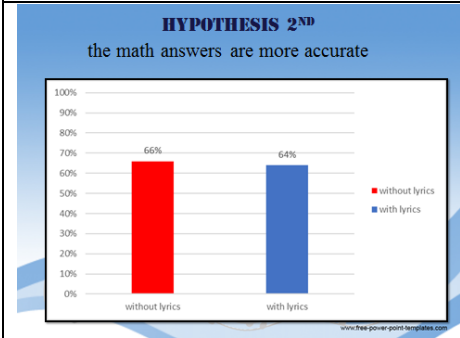
The math answers are more accurate while listening to pop music without lyrics than listening to pop music with lyrics.

OUTCOMES OF HYPOTHESIS 2ND
the math answers are more accurate

without lyrics	with lyrics
YES <input checked="" type="checkbox"/>	NO <input checked="" type="checkbox"/>




Outcomes
The math answers are more accurate while listening to pop music without lyrics .



The correct race is 66% while listening the pop music without lyrics and 64% while listening to pop music with lyrics. Thus, listening to the music without lyrics can make the concentration a little better.


HYPOTHESIS 3RD
The math answers are more accurate while listening to Andante classical music than listening to Allegro classical music.



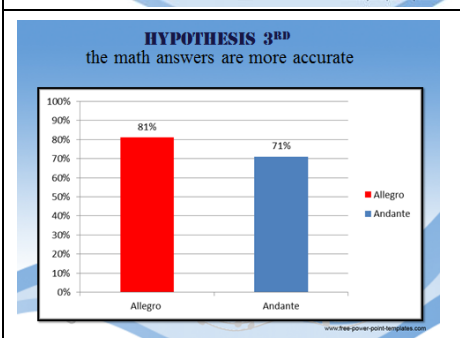
Hypothesis 3rd
The math answers are more accurate while listening to Andante classical music than listening to Allegro classical music.

OUTCOMES OF HYPOTHESIS 3RD
the math answers are more accurate

Allegro	Andante
YES <input checked="" type="checkbox"/>	NO <input checked="" type="checkbox"/>



Outcomes
The math answers are more accurate while listening to Allegro classical music .



The correct rate is 81% while listening to Allegro classical music and 71% while listening to Andante classical music. I speculate that the sixth grade students prefer faster melody more.

CONCLUSION



Conclusion

1. the influence of the type of music on the correct rate of Math Answers

the type of music	classical music	pop music
the correct rate	15% higher	

having a good concentration when listening to classical music



1.the influence of the type of music on the correct rate of Math Answers

It was found that the correct rate of answers for students listening to classical music was 15% higher than that of listening to pop music. I speculate the students of sixth grade like pop music more so they can't concentration on answering the math questions while listening to pop music .

2. the influence of the effect of tempo on the correct rate of Math Answers

the type of music	Allegro (快)	Andante (慢)
the correct rate	10% higher	

having a good concentration when listening to Allegro classical music



2. the influence of the effect of tempo on the correct rate of Math Answers

It was found that the correct rate of answers for students listening to Allegro classical music was 10% higher than that of listening to Andante classical music. Presumably, maybe it is because the students of sixth grade prefer classical music with a slightly fast tempo so they can keep their brain awake while listening it.

3. the influence of the pop songs of lyrics on the correct rate of Math Answers






the lyrics	with lyrics	without lyrics
the correct rate	only a difference of 2%.	

no obvious effect on the students ' answers when listening to pop songs



3. the influence of the pop songs of lyrics on the correct rate of Math Answers

It was found that the lyrics had no obvious effect on the students ' answers, and there was only a difference of 2%.The reason for this is that the students sixth grade like pop music, so even if there is no lyrics in pop music, they can also hear the tempo of that song.

<p style="text-align: center;">SUGGESTIONS</p> 	<p>Suggestions</p>
<p style="text-align: center;">SUGGESTIONS</p> <p>Math Question Double check the question and results</p> <p>the type of music Choose music that is significantly different</p> 	<p>Math Question Double check the question and results the type of music Choose music that is significantly different</p>
<p style="text-align: center;">EXPERIENCE</p> 	<p>Experience</p>
<p style="text-align: center;">EXPERIENCE</p> <p>TO do experiments The main points : double-check the experimental process, plan the complete architecture, etc.</p> <p>The knowledge of music Learned that Music can boost concentration <i>What I learned</i> <i>will be invaluable in the future.</i></p> 	<p>After months of research, from experimental design, preparation, confirmation, pilot tests to formal tests, I learned the main points of doing experiments, for example, plan the complete architecture before research. And through research, I gained more understanding of music. I believed that all that has been learned during this time will be invaluable in the future.</p>
<p style="text-align: center;">REFERENCE</p> <p>Websites Chinese books 我學到音樂可以提高專注力 聽音樂，是專注力最有效率的投資 learned that Music can boost concentration</p> 	<p>There are 5 reference, websites and books.</p>