



THE 5th INTERNATIONAL CONFERENCE
OF SCHOOL AS LEARNING COMMUNITY
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PLENARY SYMPOSIUM 2

Development of teachers' vision
focusing on
' How to design a jumping task '
in High School in Japan

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Research fellow in Azabu Institute of Education ,Tokyo
Lecturer in Azabu University ,Kanagawa

永島 孝嗣 [Takashi Nagashima M.D.]

Landscape : High School in Japan



Landscape : High School in SLC





宋人有閔其苗之不長而揠之者
芒芒然歸 謂其人曰今日病矣
予助苗長矣
其子趨而往視之 苗則槁矣

宋人^ノ有^ル閱^ス其^ノ苗^ヲ
之^レ不^ク長^ク而^{シテ}揠^ス之^ヲ
者^ハ茫^々然^{トシテ}歸^リ謂^フ
其^ノ人^ヲ曰^ク今日^ハ病^ム
矣^ニ予^ハ助^メ苗^ヲ長^ク矣^ニ
其^ノ子^ハ趨^リ而^{シテ}往^テ視^ク
之^ヲ前^ニ即^シ稿^{トシテ}矣^ニ

Agenda of Presentation

- Why do many teachers have difficulty in designing a jumping task ?
 - A lack of method ?
 - A lack of cases ?
 - A lack of understanding of subject ?

□ Questionnaire inquiry

□ High school teachers (27/29 persons)

- Challenging Collaborative learning in their class over 3 years
- Experiencing Open class which all teachers in their school observed , more than one time

Question

□ Self reflection

□ How to choice and prepare tasks for designing lesson

- Before adopting collaborative learning to your lesson
- After adopting collaborative learning to your lesson
 - If possible , please be divided into several stages



Stage 0

- I thought lesson's purpose was letting students understand biological contents , so I have to speak and teach first .
Second students do exercise for fixing the knowledge by themselves.
- So Task is something easy which I have taught , for instance , fill-in-blank question or just writing down excerpts from textbook.
 - Afraid: not easy → no answering → no knowledge → no understanding

Stage 1a

- Lesson's purpose
- Task
 - ▣ No change

But, exercise with 4 member group

- Group activity's aim is letting students acquire communication skill for after-graduation

Stage 1 b

- Lesson's purpose
- Task
 - ▣ No change

But, exercise first , teaching second

- Task is something easy which I want to teach

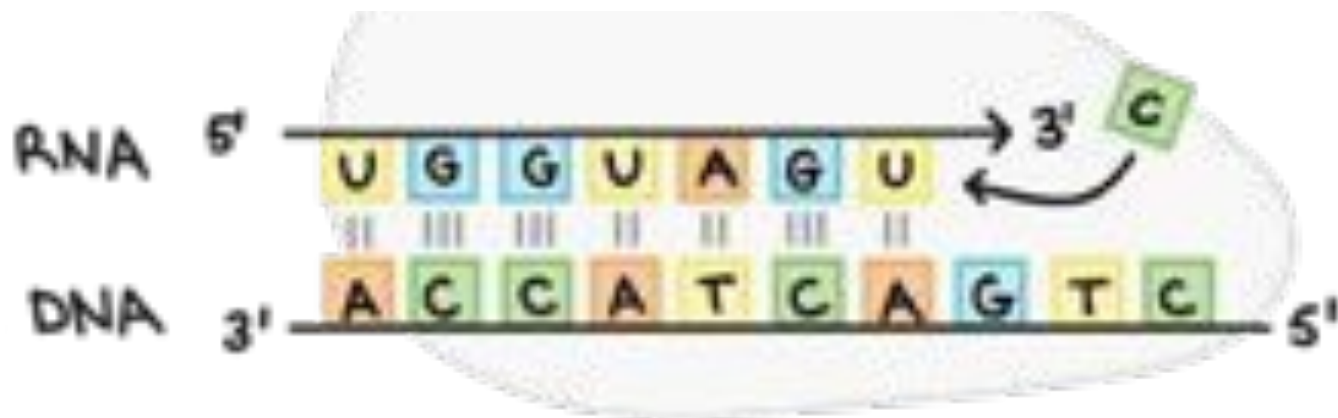
Stage 2

- I thought lesson's purpose was letting students think ,challenge and grow through biology
 - ▣ Challenging something they can't understand and making connections with others

- So task is something difficult which they can't solve by individual , for example
 - ▣ Such a question as they can't answer only with summarizing textbook
 - ▣ Such a task as they can learn on the process of their tackling even if they can't solve

Jumping task: Why is T(hymine) present in DNA instead of U(racil) in RNA ?





Complementarity



- file:///localhost/Users/Nagashima/Desktop/ppt_nagashima/170626授業後.mp4

Learning on the process tackling task

- Function of DNA
- Function of RNA
- Deamination
- Pair A&T, A&U, G&C
- Complementarity
- Transcription
- Amino acid code
- Similarity of U and T , U and C
- stability
- Evolution

Conclusion

- Difficulty in designing a jumping task is not difficulty in designing a jumping task but vision
 - Vision of lesson
 - Vision of lesson purpose
 - Vision of competency
 - Vision of students' future life
 - Vision of listening
 - Vision of learning
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Re-contextualization

- Having solved task & Learning
- Lecture & Exercise
- Basic & Advance

Thank you so much !
listening to me
Please ask me some your questions
which I can learn from
[nagasit-tky@umin.ac.jp]