E·A·S·E
East-Asian Association for Science Education

The Newsletter of
The East-Asian Association for Science Education
東亞科學教育學會通訊
http://theease.org

Vol.8, No.2
No. 0030
June. 1, 2015

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Blended Learning for Building Student-Teachers' Capacity to Learn and Teach Science-related Interdisciplinary Subjects

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This proposed project involves the development of a new set of foundation science modules for the shared use by the science education faculty of three Hong Kong tertiary institutions, namely the Hong Kong Institute of Education, Chinese University of Hong Kong, and University of Hong Kong. The modules will be delivered in a blended learning mode. The aim of designing these modules is to equip student teachers who lack foundational knowledge in science with the necessary knowledge to enable them to fully benefit from the teacher education programmes of these institutions. These science modules will provide supporting learning materials for the existing science-related teacher-training courses that equip student teachers with the content knowledge they need to teach science-related subjects in primary or secondary schools. These modules are designed for blending with existing courses in a flexible way that combines the advantages of e-learning and face-to-face contact. The e-learning or online-learning components will be delivered through Moodle, a Learning Management System (LMS). This learning environment allows for self-pacing under the guidance of the course tutor. Students can work toward different goals by building on their own background knowledge. This project, the first of its kind, will build the capacity of science education faculties to design and implement creative and innovative curriculum designs and pedagogy to address curriculum and learning issues in teacher education.

The overall objectives of the project are as follows:

1. Develop new foundation science modules that improve student teachers' basic scientific knowledge as a foundation for building further content knowledge and pedagogical content knowledge in teacher training programmes.
2. Build student teachers' capacity for scientific thinking as a basis for developing critical reasoning.
3. Create a learning environment that fosters self-paced learning among student teachers to help them adapt to the change in the quality of learning demanded by learners who are migrating from the secondary to the tertiary level of study, and from the role of learner to that of teacher.
4. Provide role models for student teachers on the use of interactive e-learning strategies blended with classroom teaching to extend the pedagogical repertoire of student teachers who will be teaching science-related subjects.
5. Build the capacity of teacher education faculties to develop an innovative shared curriculum and pedagogy to address common concerns in teacher education.

To realise these objectives, this project will involve four progressive stages of development. The first stage is the design of learning modules that can be integrated into existing teacher education courses to enhance student teachers' understanding of basic science. Such understanding will form the basis for student teachers' further development of science-related content and pedagogical knowledge and skills. The design of the learning process will be based on the 5E Instructional model. As guided by this model, the learning process will involve seven steps although these steps can be modified and integrated to meet the needs of individual courses.

Step 1: Learners' self-analysis of needs based on their understanding of the topics as revealed by diagnostic tests; this step facilitates grouping and topic assignment.

Step 2: Presentation of triggers/scenarios to motivate students to investigate the underlying scientific concepts ***(Engagement).***

Step 3: Inquiry into the topics through learner-centred individual or group activities supplemented with systematic inputs such as virtual lectures and computer simulations and modelling ***(Exploration).***

Step 4: Development of explanations relevant to the inquiry with the support of online and face-to-face tutorials ***(Explanation).***

Step 5: Application of scientific concepts/skills to wider contexts to facilitate deeper learning.

Step 6: Self-assessment with outcomes feeding back to the student and tutor ***(Elaboration).***

Step 7: Developing personalised learning portfolios using the e-portfolio tool available in the LMS to facilitate self-monitoring and the regulation of learning progress ***(Evaluation).***

The second stage is the piloting of these modules in relevant courses. The third stage is the evaluation of the trials. The final stage is the revision of the module design for more effective learning and integration with existing courses based on the evaluation outcomes. For actual implementation, these four stages will be integrated with each other as appropriate.

Enhancing elementary science education through e-learning

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Introduction

Relevant studies of the use of e-textbooks in primary education are uncommon in the literature. Within the limited number of studies, the findings regarding learners' attitudes towards e-textbooks and their effectiveness of e-textbooks seem more encouraging than those at tertiary level. While e-textbooks are seen as promising in primary education, their introduction to the classroom has been regarded as a major challenge (Lee, Messom, & Yau, 2013). This paper attempts to explore how e-textbook activities are designed to facilitate learners' inquiry learning, in science learning. The framework of resource-based inquiry learning environments (RBILEs) which underpins the e-textbook design is introduced. Examples such as the seasons, the movement of the earth and other science topics are used to explain how the designed activities guide the inquiry of daily science phenomena through the use of the multimedia resources and learning tools provided by the e-textbook.

Resource-Based Inquiry Learning Environments (RBILEs) framework

The Resource-Based Inquiry Learning Environments (RBILEs) framework is based on the RBeLEs framework which was developed by drawing insights from the two discussions of learning environments, resource-based learning environments (Hill & Hannafin, 2001) and learning sciences-based learning environments (Blumenfeld, Kempler, & Krajcik, 2006), and by building on the findings of a study that attempted to understand how teachers utilize online resources to design beneficial e-learning environments (So, 2012). The RBILEs consists of the following components for promoting learning with the design of e-textbooks: identifying contexts for inquiry, selection of resources, use of technology and tools, and creating multiple learning experiences (Figure 1).

Figure 1: Resource-Based Inquiry Learning Environments (RBILEs) framework

Identifying contexts for inquiry refers to the creation of the settings in which learning takes place, with an emphasis on learners' learning interest, authenticity, and learning autonomy and is closely related to learners' everyday life. The use of both computer simulated contexts and experiential learning contexts provides inquiry opportunities for learners inside and beyond the classroom.

Selection of resources from the huge data bank of the Internet and from the natural world constitutes the core information for learners' inquiry, including audio clips, video clips, photos/graphics, computer software, animations, and text files. Resources can be dynamic or static. Static resources have relatively stable contents while dynamic resources experience regular, sometimes constant changes. Resources need to be relevant and suitable for learners to maintain their interest and promote their cognitive engagement.

Use of technology and tools aids the location, access, manipulation, interpretation, and evaluation of resources (Hill & Hannafin, 2001). Tools can be categorized into various types: searching and seeking, information and data collection, organizing and integrating, collaborating, information processing, and communicating.

Creating multiple learning experiences enriches and consolidates the learners' learning processes, including the use of information technology for interactive learning, simulated science inquiry, use of community resources such as museums, government facilities and NGOs for project learning , as well as participating in service learning. '

Opportunities for science inquiry in the e-textbook

Encouraged by the Hong Kong government, a series of e-textbooks for different subjects has been developed recently. General Studies (GS) as a core subject in the primary curriculum is one of the targeted subjects for e-textbook development. Science education is one of six strands of the curriculum content of GS. The e-textbook designed for General Studies (hereafter referred to as e-GS) makes reference to RBILEs with an aim to provide a well-designed intended curriculum, units, lessons and activities with multi-media resources to facilitate teacher' guidance of learners through inquiry learning in accordance with broad learning targets specified in the government curriculum document.

Three approaches, namely "Evidence-Based", "Experiential" and "Predict-Observe-Explain" used in the e-GS are illustrated with examples to show how multi-media resources are used to guide learners' inquiry of science phenomena for conceptual understanding.

1. The Evidence-Based Approach

The design of teaching and learning activities based on the evidence-based approach usually provides web-based static and/or dynamic data and information for learners to develop understanding of natural phenomena. The topic "The Seasons" is a good illustration of this approach.

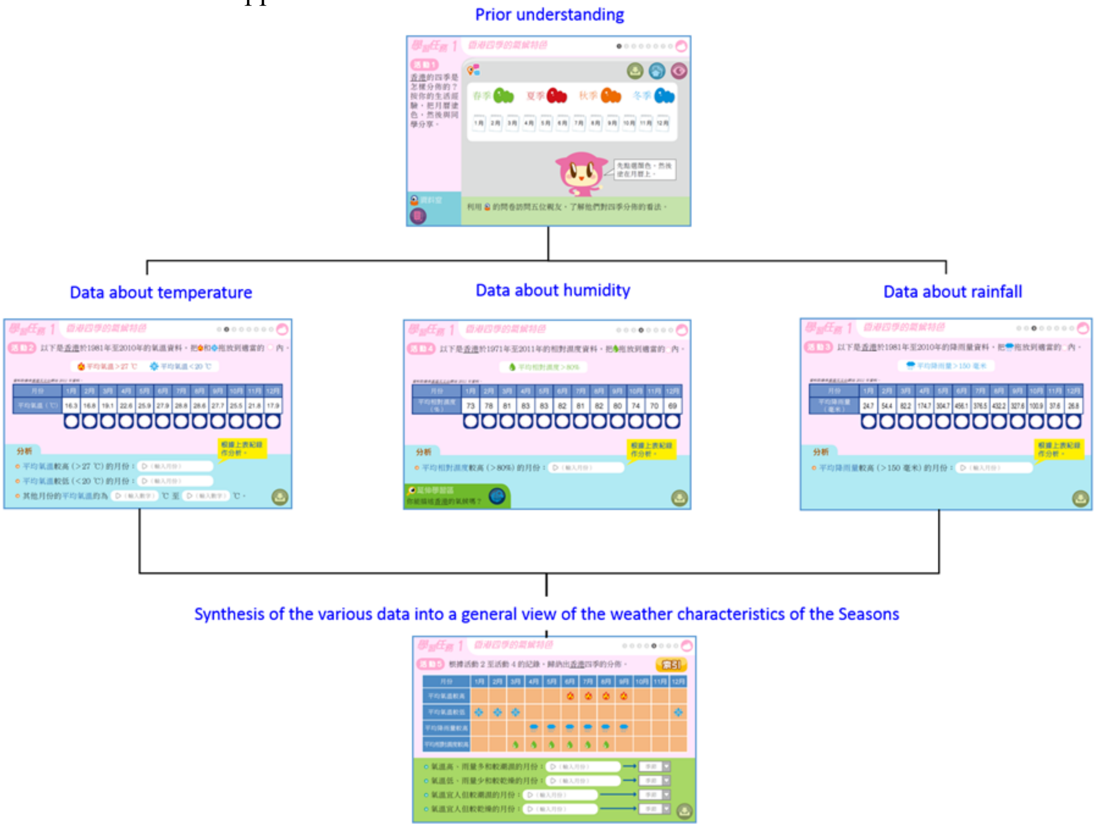

Figure 2: Flow of inquiry for the seasons

The Seasons. The objective of this lesson is to develop learners' understanding of the concept of seasons, focusing on their distribution throughout the year and their weather characteristics. At the very beginning, learners are required to reveal their current understanding of the seasons through an activity using e-painter to color the months for the different seasons. Their coloring results are uploaded and shared with peers for an overview of the class' understanding of the seasons. The teachers can then adjust the teaching according to the learners' prior conceptions. In the subsequent learning tasks, relevant weather data on temperature, rainfall and humidity of the twelve months were selected and extracted from the Hong Kong Observatory website as the resources to guide the inquiry learning. The guiding questions serve as scaffolds to guide learners to analyze the weather data to generalize the commonality in temperature, humidity and rainfall for each season. This is followed by a video clip with an alternative description of the weather characteristics of the seasons for learners to identify the differences in what they found from the data. Finally, there are mind maps and exercises for the learners to consolidate their understanding of the seasons and weather by establishing the schema of seasons cognitively. The flow of inquiry about the weather of the seasons using multimedia resources is described below (Figure 2).

2. The Experiential Approach

The design of teaching and learning activities based on the experiential approach usually comes with animations, videos and stimulations for learners to develop understanding of the natural phenomena. The topic "Breathing" is an illustration of this approach.

Breathing. The objective of this task is to develop learners' understanding of how breathing takes place. Firstly, learners are required to take a deep breath with their hands on their chest to feel the movement in order to predict what happens to their ribs, diaphragm, and chest while breathing in and out. Their predictions will be uploaded to generate a summary of views for teacher and learners to review the learners' prior understanding. This is followed by an activity in which learners collect data to verify their predictions by watching a video clip, which vividly demonstrates how breathing takes place. There is another activity with the use of e-painter (or alternatively using a printed worksheet) for learners to draw the route of breathing air after viewing the video. A click of the "Check" button provides information for the learners to check if their drawing is correct or not. In the end, the learners will evaluate their predictions made earlier. The illustration of the flow of inquiry of breathing is shown below (Figure 3).

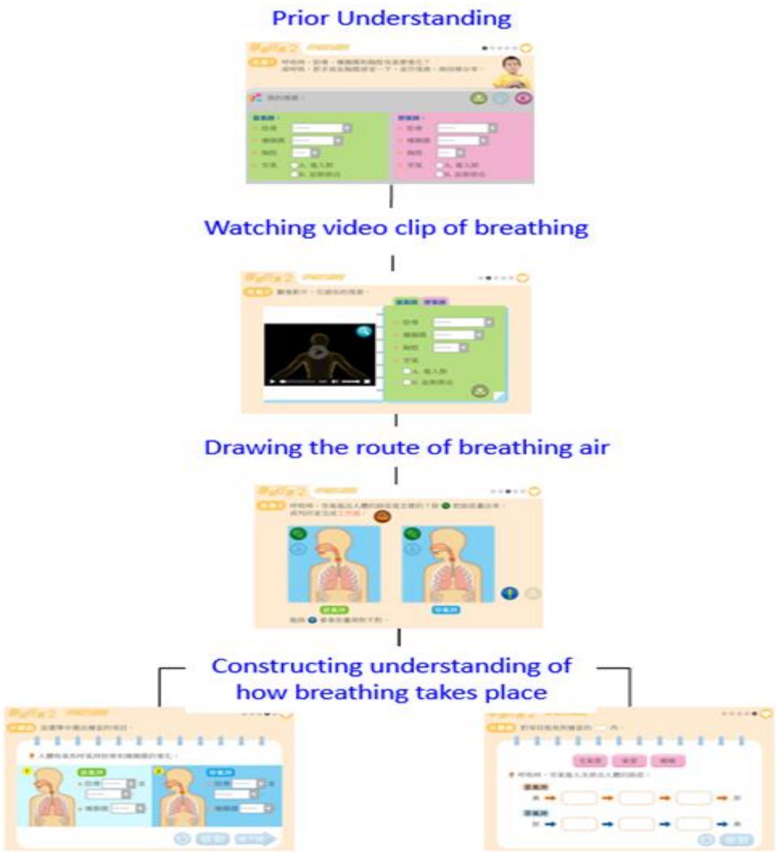

Figure 3: Flow of inquiry for breathing

3. The "Predict-Observe-Explain" Approach

The design of teaching and learning activities based on the "Predict-Observe-Explain" approach begins with prediction based on learners' own experience. Virtual experiments in the form of videos or animations provide opportunities for learners to test out their predictions. Learners' observations and records of the experimental results facilitate their development of understanding of some physical phenomena. The topic "electric circuits" is used to illustrate how this approach guides science learning.

Electric circuits. The objective of the topic is to help learners learn the characteristics of an electric circuit, conductors and insulators. This topic starts with asking learners to explain why an electric toy car fails to move. Four scenarios each with the batteries in different locations are provided for learners to discuss on the possible ways to make the electric toy car to work again. This is followed by an interactive activity asking learners to build an electric circuit with the various components. Next comes an interactive activity for learners to develop the principle of switches (breaking/completing the electric circuit). At this junction, extended learning tasks can be added for learners to work out the relationship between the number of batteries used and the brightness of a light bulb. The concept of conductors and insulators is introduced through an interactive simulation experiment starting with prediction, then observing and recording the results when different materials are inserted into the circuit gap. Guiding questions will follow to let the learners think about the commonality of the materials which allow or do not allow the flow of electricity (Figure 4).

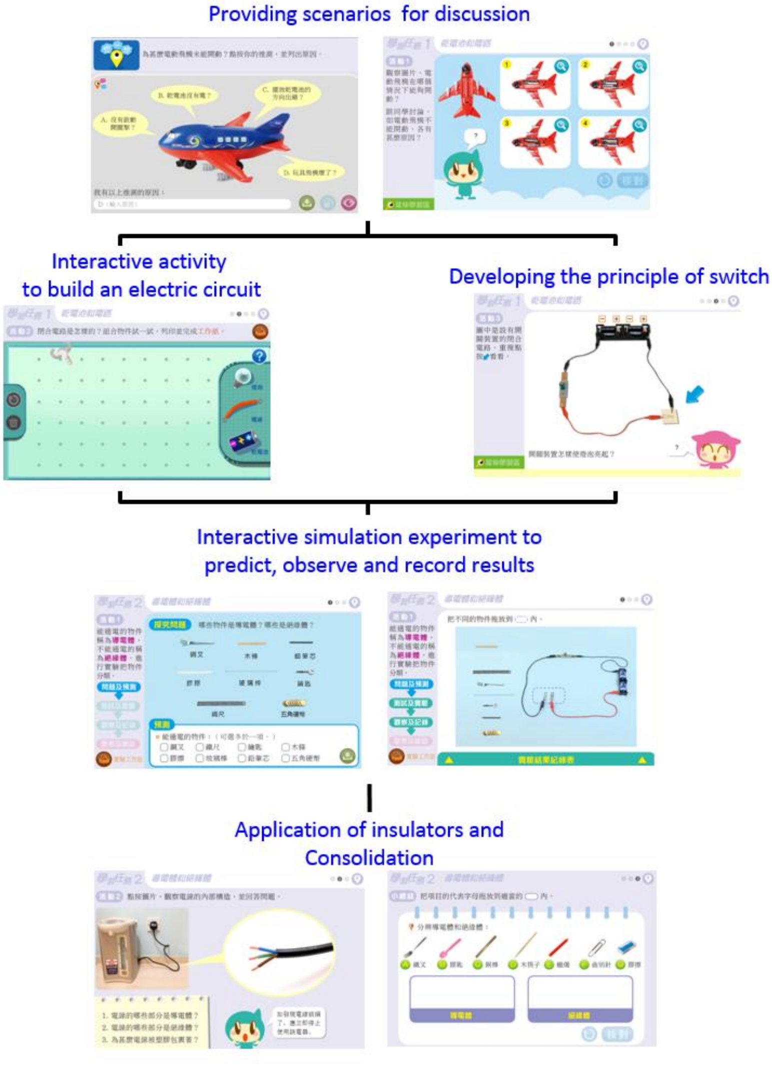

Figure 4: Flow of inquiry for electric circuits

Conclusions

In the 21st century, information can be acquired readily through the plethora of new media channels available. The kinds of information or knowledge provided in traditional printed textbooks are no longer sufficient for either teachers or learners in and beyond the classrooms. New technology and sound pedagogical practices based on the new paradigm of teachers as learning facilitators and learners as active learners are very much needed.

Several concrete examples such as the seasons, breathing, and electric circuits using the different approaches of "Evidence-based", "Experiential" and "Predict-Observe-Explain" have been discussed to show how the design of e-textbooks facilitate learners' inquiry of science phenomena. The e-textbook serves as a systematic platform with well selected multimedia resources for effective inquiry of daily phenomena for constructing conceptual understanding and personalized learning. The various examples illustrate that the design of e-textbooks based on RBILEs promotes learners' science inquiry in a friendly and easy manner. Yet, there is no single 'best practice' or 'right way' to integrate technology into the classroom to enhance learning and teaching; the key is to provide the most user friendly and facilitating learning environments for learners to inquire about daily science.

References

Blumenfeld, P. C., Kempler, T. M., & Krajcik, J. S. (2006). Motivation and cognitive engagement in learning environments. In R. K. Sawyer (Ed.), *The Cambridge handbook of the learning sciences* (pp. 475–488). Cambridge, UK: Cambridge University Press.

Hill, J. R., & Hannafin, M. J. (2001). Teaching and learning in digital environments: The resurgence of resource-based learning. *Educational Technology Research and Development*, *49*(3), 37–52.

Lee, H. J., Messom, C., & Yau, K. L. A.(2013). Can electronic textbooks be part of K-12 education?: Challenges, Technological solutions and open issues. *The Turkish Online Journal of Educational Technology*, *12*(1), 32-44.

Lee, H. J., Messom, C., & Yau, K. L. A.(2013). Can electronic textbooks be part of K-12 education?: Challenges, Technological solutions and open issues. *The Turkish Online Journal of Educational Technology*, *12*(1), 32-44.

So, W. M. W. (2012). Creating a framework of a resource-based e-learning environment for science learning in primary classrooms. *Technology, Pedagogy and Education*, *21*(3), 317-335.

The ethical reasoning of Chinese high school biology teachers on assisted reproductive technologies

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Abstract: This study investigated Chinese high school biology teachers' attitudes towards and ethical reasoning of the bioethical topic of assisted reproductive technology. A survey was conducted with 59 high school biology teachers in Zhejiang province, China. The findings indicated that the attitudes of the participants were generally negative, and such an attitude trend might be partially affected by traditional Chinese ethical perspectives. In addition, this study found that the participants used the utilitarian ethical framework more often than the other three ethical frameworks which are autonomy, rights and duties, and virtue ethics. The implications of this study are discussed.

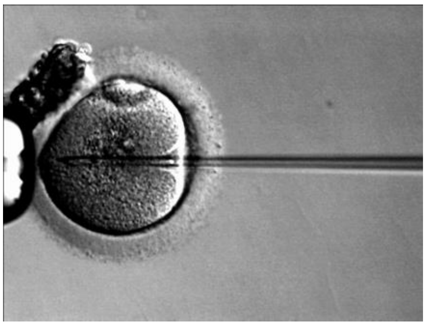
Keywords: ethical reasoning, socio-scientific issues, in-service biology teachers

1. Introduction

Teaching science in a context of socio-scientific issues (SSI) has attracted increasing attention among science educators (e.g., Levinson, 2006; Presley et al., 2013; Zeidler, Sadler, Simmons, & Howes, 2005). One justification is that SSI could provide an ideal platform for students to discuss the ethical aspects of science and to develop reasoning and decision-making skills regarding SSI (Zeidler et al., 2005). However, the existing studies have indicated that most science teachers show a lack of confidence in raising moral discussions of SSI (Saunders & Rennie, 2013). One impeding factor would be the lack of moral-ethical reasoning skills (Lee et al. 2006).

Ethical reasoning is defined as 'lead[ing] to judgments about right and wrong, good and bad, fair and unfair, presenting special difficulties' (Hughes & Lavery, Chapter 12, pg. 219, 2008). It usually involves the use of diverse ethical frameworks, including utilitarian, rights and duties, autonomy, and virtue ethics and so forth (Reiss, 2008; Keslin-Samanci, Özer-Keskin, & Arslan, 2014). Several studies have been conducted to investigate the ethical reasoning of secondary school students (e.g., Fowler, Zeidler, & Sadler, 2009; Keskin-Samanci et al., 2014; Macer et al., 1994) or pre-service teachers (Topcu, Tuzun, & Sadler, 2011).

However, such studies have seldom been conducted in Mainland China and few have addressed the ethical reasoning of in-service science teachers. Therefore, this study explored the attitudes and ethical reasoning of Chinese high school biology teachers on the issue of assisted reproductive technology (ART). The research questions were: (1) What attitudes do Chinese high school biology teachers have towards ART? and (2) What ethical frameworks do Chinese high school biology teachers adopt when reasoning on the issues related to ART?



Assisted reproductive technology

2. Methodology

This survey involved 59 high school biology teachers (male 20, female 39) in Zhejiang, China. The questionnaire that used were adopted and modified mainly from the international bioethics survey of Macer et al. (1994). Following collecting several basic information of participants, including gender, academic level, and years of teaching, this questionnaire explored the participants' attitudes toward genetic modification, gene therapy and assisted reproductive technology and their ethical reasoning with three multiple-choice questions. Each question required the participants to make moral choices first, and then provide reasonable explanations. Figure 1 shows the example. The content validity of the modified questionnaire was checked by three experts in science education.

The data analysis consisted of two steps. Firstly, the general attitudes of the participants were investigated by calculating the number of participants who approved of the use of these three biotechnologies. Secondly, in order to understand the ethical reasoning patterns of the participants, thematic content analysis strategies were applied using the four ethical frameworks in Reiss (2008). This article only reports the results related to the issues of ART.

3. Results

One basic method of ART is in vitro fertilization (IVF). In this method, one woman's eggs are fertilized by sperm outside the body and then the fertilized eggs are implanted in the same woman's uterus to complete a pregnancy. For IVF used in different situations, donated sperm, donated eggs, cryopreservation of embryos, and/or a surrogate mother may be needed with the intention of increasing the success rate of the pregnancy.

Figure 1 presents the results of the participants' attitudes towards ART. It indicates that few participants rejected the use of IVF when both eggs and sperm were taken from the biological father and mother. In other situations, IVF with egg donation was more acceptable among the participants (35). Relatively few participants (26) accepted sperm donation. However, almost three-quarters of them (74.6%) disapproved surrogacy, while over 80% disagreed with the use of cryopreservation of embryos.

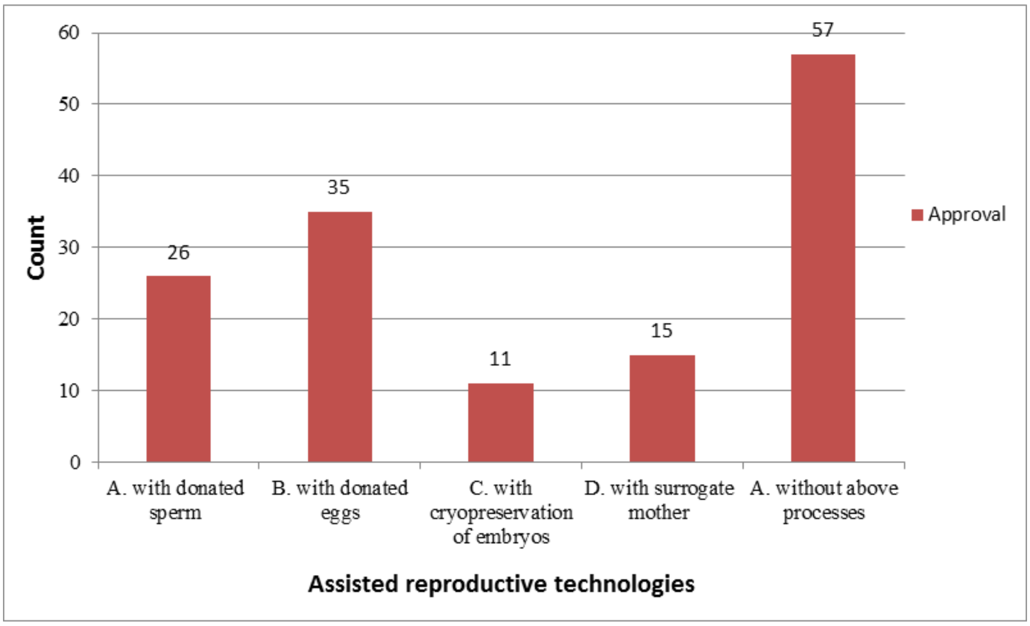


Figure 1: Participants' attitudes toward assisted reproductive technologies

Table 1 summarizes the ethical reasoning patterns of the 32 participants who provided explanations of their decisions. The results reveal that most of these 32 participants were able to evaluate the benefits and risks of assisted reproductive technologies, implying that they applied the approach of consequentialism when negotiating with these issues. As shown in Table 1, 9 participants mentioned that the use of assisted reproductive technologies might be beneficial for the families who desired children, as well as for society. However, 3 participants worried about the misuse of these technologies and 5 participants voiced concerns about the legal issues and other harm which might be caused by processing donations and/or surrogacy. The other participants seemed to take a neutral position by suggesting that assisted reproductive technologies should be used with sufficient control so as to reduce harm.

Table 1: Ethical frameworks used in the context of ATR

Ethical frameworks	Themes	N
Utilitarianism	Promoting benefits	
	Give birth to a child	6
	Beneficial for society	3
	Having risks	
	Redefinition of motherhood	1
	Misuse	2
	Legal issues	3
	Other harms	2
	Avoiding harms	
	Insufficient control/ depends on situation	3
	Through adoption	1
Rights and duties	Rights of having a child	1
	Obey ethical rules	1
Autonomy	Respect people's autonomy	1
Virtue values	Confucian ethics	
	The emphasis of blood relationships	7

The rights and duties approach was used by two participants, with one who emphasized the human rights of having a baby and the other who believed that people should obey the basic ethical rules. For the use of the autonomy approach, one participant explained that respect should be shown because it was autonomous for one person to make his/her own decisions. More interestingly, almost one-quarter of the participants explicitly mentioned that such practice would contradict traditional Chinese ethics, which taking family as the community and emphasizing continuity from generation to generation (Fan, 2008).

4. Discussion and implications

The main purpose of this study was to understand the attitudes and ethical reasoning of Chinese high school biology teachers in resolving the bioethical issues related to assisted reproductive technology. It is not surprising that our participants were generally negative about the use of sperm or egg donations, cryopreservation of embryos and/or surrogacy. Such an attitude trend may be affected by Chinese traditional ethics and, in particular, Confucian ethics.

As for their ethical reasoning, the results clearly show that the participants mostly used the ethical framework of Utilitarianism. They show the ability of perceiving or balancing the benefits and/or risks of ART. However, they seldom used the other ethical approaches such as autonomy, rights and duties, and virtue values. According to Reiss (2008), the apparent preference for utilitarianism might result from the nature of the issue. This issue seemed to encourage our participants to take into greater consideration the advantages and disadvantages. Therefore, the contexts of SSI or bioethical issues would be factors that influence the ethical reasoning of our participants. Such a finding is consistent with previous findings that informal reasoning about SSI is somewhat context-dependent (Topcu et al., 2010).

However, on the other hand, it is possible that for the majority of our participants, their skills of using multiple ethical frameworks are limited. One reason would be that they lack the ethical knowledge of science because most of them have a pure science background. In addition, they do possibly not understand how to use different ethical frameworks to explore this bioethical issue from diverse perspectives. Hence, it is suggested that supports should be provided for our biology teachers to enhance their ethical knowledge of science as well as their ethical reasoning skills, which would subsequently contribute to an increase in their confidence in teaching controversial issues, as mentioned by Levinson and Turner (2001).

One specific finding is the use of Confucian ethics in ethical reasoning. Fan (2010) described Confucian ethics as an alternative virtue ethics characterized by 'non-principlist, anti-anonymous, and family-based moral features' (pg. 63) which includes the core values of respecting ancestors, enhancing normal human relations and promoting the prosperity, integrity, and continuity of the family. He also indicated that profound ethical resources in Confucian ethics can be drawn on to reflect on the ethical dilemmas related to contemporary biotechnologies (Fan, 2010). Therefore, Chinese biology teachers, in addition to using western ethical theories, can also adopt Confucian ethics as resources to facilitate students' moral discussions on science-related issues. However, still more in-depth studies are needed to explore how Confucian ethics can be effectively applied to solve the issues in bioethics.

Reference

Fan, R. (2010). A Confucian reflection on genetic enhancement. [Research Support, Non-U.S. Gov't]. *Am J Bioeth, 10*(4), 62-70.

Fowler, S. R., Zeidler, D. L., & Sadler, T. D. (2009). Moral Sensitivity in the Context of Socioscientific Issues in High School Science Students. *International Journal of Science Education, 31*(2), 279-296.

Hughes, W., & Lavery, J. (2008). *Critical thinking : an introduction to the basic skills* (5th ed.). Peterborough, Ont.: Broadview Press.

Keskin-Samanci, N., Özer-Keskin, M., & Arslan, O. (2014). Development of 'Bioethical Values Inventory' for Pupils in Secondary Education within the Scope of Bioethical Education. *Eurasia Journal of Mathematics, Science & Technology Education*, *10*(2).

Lee, H., Abd-El-Khalick, F., & Choi, K. (2006). Korean science teachers' perceptions of the introduction of socio-scientific issues into the science curriculum. *Canadian Journal of Science, Mathematics and Technology Education*, *6*(2), 97-117.

Levinson, R. (2006). Towards a theoretical framework for teaching controversial socio- scientific Issues. *International Journal of Science Education*, *28*(10), 1201-1224.

Levinson, R., & Turner, S. (2001). Valuable lessons: Engaging with the social context of science in schools. London: The Wellcome Trust.

Macer, D. R. (1994). *Bioethics for the people by the people*. Christchurch, N.Z.: Eubios Ethics Institute

Presley, M. L., Sickel, A. J., Muslu, N., Merle-Johnson, D., Witzig, S. B., Izci, K., & Sadler, T. D. (2013). A framework for socio-scientific issues based education. *Science Educator*, *2013*(22), 1.

Reiss, M. (2008). The use of ethical frameworks by students following a new science course for 16–18 year-olds. *Science & Education*, *17*(8-9), 889-902.

Saunders, K. J., & Rennie, L. J. (2013). A Pedagogical Model for Ethical Inquiry into Socioscientific Issues In Science. *Research in Science Education*.

Zeidler, D. L., Sadler, T. D., Simmons, M. L., & Howes, E. V. (2005). Beyond STS: A research-based framework for socioscientific issues education. *Science Education, 89*(3), 357-377.

Upcoming Conferences

1. 2015 Annual Conference of the Australasian Science Education Research Association (ASERA), June 30 – July 3, 2015, the University of Western Australia, Perth, Australia
2. 2015 The Conference of the International History, Philosophy, and Science Teaching Group (IHPST), July 22-25, 2015. CEFET, Rio de Janeiro, Brazil
3. 2015 the 11th Conference of the European Science Education Research Association (ESERA), August 31 - September 4, 2015, Helsinki, Finland
4. 2015 California Science Education Conference, October 2-4, 2015, Sacramento, CA
5. 2015 International Conference of East-Asian Association for Science Education (EASE), October 16-18, 2015. Beijing Normal University, Beijing, China, http://ease2015.csp.escience.cn/dct/page/1

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