

# Students and Faculty Perspectives of a Problem-Based Learning Online Nursing Ethics Seminar in Japan

Kyoko Murakami<sup>1</sup>, Misae Ito<sup>1</sup>, Masae Tsutsumi<sup>1</sup>, Chizuru Nagata<sup>1</sup>, Aiko Tanaka<sup>1</sup>, Jane Conway<sup>2</sup>, Teresa E. Stone<sup>1</sup>

<sup>1</sup>Nursing and Laboratory Science, Graduate School of Medicine, Yamaguchi University, Ube, Japan

<sup>2</sup>University of Newcastle, College of Health, Medicine and Wellbeing, Callaghan NSW, Australia

**Purpose:** This qualitative study captured nurse academics' experience of creating an online nursing ethics seminar at post graduate level through an action research process.

**Methods:** A template for reflections from students and staff about their experience of the seminar was used. Responses were received from students and staff who participated in the seminar and analysed for key themes.

**Results:** The 10 student participants and 5 Japanese teaching staff reported overall positive experiences with the implementation. Key themes emerging were building on learning; participation and group engagement; facilitation versus expert delivery; and translation into practice.

**Conclusions:** The findings are consistent with attempts to implement PBL and online learning elsewhere, but yet to be widely adopted in Japan. There is a need to embed inquiry-based learning PBL approaches in Japanese higher education. This study provides encouragement to participants and others considering implementing online PBL in nursing courses.

**Keywords:** Problem-based learning; action-research; education; ethics education; online learning

## Original Article

pISSN 2288-8675 · eISSN 2508-9145  
J Probl Based Learn 2021;8(1):13-23  
<https://doi.org/10.24313/jpbl.2021.00024>

Received: February 25, 2021

Revised: March 22, 2021

Accepted: March 27, 2021

Corresponding author:

Kyoko Murakami, RN, PhD  
Nursing and Laboratory Science,  
Graduate School of Medicine,  
Yamaguchi University 1-1-1 Minami-  
kogushi, Ube, Yamaguchi 755-8505  
Japan

Tel: +81-836-22-2820

Fax: +81-836-22-2820

E-mail: [k.mura@yamaguchi-u.ac.jp](mailto:k.mura@yamaguchi-u.ac.jp)

## INTRODUCTION

The purpose of this study is to report on the creation of an online nursing ethics seminar using problem-based learning (PBL) through a participatory action research (PAR) process. Like many other universities across the world, Yamaguchi University School of Health Sciences were forced into a rapid transition into online teaching by the coronavirus pandemic (Kato et al., 2020). Use of web-based learning in nurse education in Japan has been limited and academics and students are largely unfamiliar with this mode of teaching as in Japan web-based learning tends to be used for the delivery of demonstration of clinical skills via video or as part of research degree supervision. There are few examples of the application of the principles of PBL as a teaching and learning strategy in nurse education in Japan. This paper reports on the development of an online seminar in nursing ethics for nurses studying at masters level using PBL through a PAR process. The seminar was created to trial PBL online and determine if adoption of PBL and online learning would be viable in ethics courses in nursing at Yamaguchi University.

### Background

Providing patient care based on ethical principles is required in every clinical setting from primary care to general hospitals. Thus, a sound grounding in ethics is essential for nursing students and nurses. There is a diversity of opinion about what should be included in ethics

© Copyright 2021 International Society for Problem-Based Learning

© This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0/>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

education, whether it should be taught as a separate subject or integrated into other units, scope, method of delivery, and how quality in ethics education is measured (Avcı, 2017). Japanese academics used narrative writing and narrative group work with post graduate students in a post graduate ethics course to effectively reveal nurses' cognitions and perceptions around ethics in nursing practice (Tsuruwaka & Asahara, 2018), however there are few examples of online PBL used in ethics courses in Japanese nurse education.

The existing ethics course for nurses at Yamaguchi University was run over a semester (15 weeks) for 1.5 hours per week by zoom in 2020 for postgraduate nurses with clinical experience enrolled in a masters program. The content of the existing ethics course included an introduction to ethics and its application to health and nursing in the context of adult nursing, maternal and child nursing, aged care nursing, and mental health nursing. Professors with expertise in these clinical areas co-facilitate the course. The mode of delivery was a series of fifteen 90-minute face to face lectures followed by a discussion with case studies used as stimulus material.

In order to determine the acceptability of using both online and PBL for future offerings of the ethics course, online seminars that used PBL principles were designed and delivered to volunteer participants for 90 minutes for each of 4 weeks.

Developing high-quality online courses requires skills in instructional design and the development of course materials, new ways of thinking about pedagogy, and has been viewed as being costly in time and money (Altbach & de Wit, 2020). Moving into an online teaching environment in higher education requires commitment from faculty and university management as it involves careful planning, upskilling of faculty members, and technical support. Recommendations for teaching medical students ethics (Goldie, 2000) are applicable to all health professional students and include a move away from teacher-centered to learner-centered teaching using PBL; a reduction in the amount of factual information students are required to master because the central focus of ethics in health professional practice is clinical reasoning and problem-solving and a corresponding move away from lecture delivery of content in ethics education towards small group case discussion (Goldie, 2000; Tsuruwaka, 2018).

Each of these recommendations is consistent with using PBL which can be both a curriculum design and a teaching/ learning strategy. Problem-based learning simultaneously develops higher order thinking and disciplinary knowledge bases and skills by placing students in the active role of problem solvers (practitioners) when presented with situations (ill-structured problem) that reflects the real world (Conway, Little, & McMillan, 2002).

A PBL approach tends to “turn regular learning upside down” because it requires that students identify issues and respond to problems before they are given instruction (Maxwell, 2020) and promote student engagement “solving a problem nested in reality” through the use of meaningful and authentic situations (Mikouchi, Akita, & Komura, 2019). For over half a century problem-based learning has been found to be equal to traditional approaches in terms of conventional tests of knowledge with students in PBL courses exhibiting better clinical problem-solving skills, interpersonal skills, and satisfaction with learning although definitive evidence of its superiority as a pedagogical approach has been disputed (Wosinski et al., 2018). Nevertheless, a systematic review of literature of the use of PBL in nurse education concluded that PBL fosters clinical reasoning in students where there is sound facilitation and quality group interaction (Wosinski et al., 2018). Although concerns have been raised about courses being delivered online (Altbach & de Wit, 2020), online ethics education for health professionals have previously been found to be effective in a range of contexts (Chao, Chang, Yang, & Clark, 2017; Cho & Shin, 2014; Leppa & Terry, 2004; Schröder-Bäck et al., 2014). However, it has been suggested that students may have concerns about online learning and be reluctant to participate, thus careful design of the learning experience is required to encourage interaction by using a problem-based learning approach using authentic, context-relevant stimulus materials (Zhang et al., 2019). As authors from Taiwan note, in countries where online learning is not in the model of learning, elements of PBL, such as small group case discussion, are used in nursing ethics courses but classes are not usually online (Chao et al., 2017). This study aimed to capture nurse academics and student perspectives of the implementation of a PBL online nursing ethics course in Japan.

## METHODS

### Approach

Nurse academics in Japan were required to immediately implement online learning in response to the coronavirus pandemic. The research group came together to explore the most effective way to implement online teaching and to learn and develop effective pedagogies for online teaching. This resulted in the involvement of two Australian nurse academic colleagues.

Action research was used to capture the experiences of nursing faculty in the process of creating the nursing ethics seminar. It is a cyclical mechanism of planning, acting, observing, and reflecting for strategic action and was chosen as a framework because it explicitly seeks to bring about change and improvement (Kember,

2002). It can be characterised as a 'bottom-up' quality enhancement process concentrating on issues of interest or concern relating to the delivery of online learning and assessment of the nurse academics. The movement in qualitative research has been away from validity criteria similar to those of quantitative paradigms "toward a greater variety of validity considerations that include the practical, the political, and the moral" (Reason, 2006 p.191). Action research is designed to address worthwhile practical real-world problems with reasonable actions therefore the primary rule in approaching quality is that researchers are aware of the decisions they have made and their consequences (Reason, 2006).

Core seminar content, student learning activities, and assessment strategies were developed to align with the learning objectives. Reading materials that included the principles of nursing ethics and approaches to examining ethical issues were distributed to students prior to seminar commencement. The first two sessions comprised introductions to the facilitators and participants, an explanation of seminar requirements, and an explanation about facilitation in PBL. Case studies were used as an aid to PBL to stimulate reflection, debate, and discussion around ethical principles (Schröder-Bäck et al., 2014). Stimulus material for PBL-style class discussion centered around a woman with dementia and ethical dilemmas around choice, patient safety, the duty of care, and end of life. The "four topics" approach to clinical ethics case analysis proposed by Jonsen, Siegler, and Winslade (2006), widely used in nursing ethics, was introduced at the beginning of the second day after students had examined the case. It was used to summarise the discussion and presented as a possible tool to use for analysis of ethical dilemmas and case studies. Each topic—medical indications; client preferences; quality of life; and context — prompts questions to be considered (Schumann, & Alfandre, 2008).

In the last two sessions participants presented and led a discussion on the case from their work context. The 10 student participants were divided into two groups for discussion. The "Zoom" cloud meetings platform was utilized in this study as a tool for virtual teaching to facilitate participation from those outside the university. Students were given clear instructions on how to use the platform and the breakout and chat functions used to facilitate an interactive online environment.

## Participants

Participants included both nurse academics as an action research team and student participants as learners in PBL. The participant-researcher team was made up of five Japanese and two Australian academics - all were professors. Japanese faculty members had expertise in a variety of nursing specialties including

ethics, older person's care, end of life care, and pediatrics and all had input into the design and delivery of the online seminar. The Australian academics supported the team with expertise in online learning, PBL and action research methodology.

Student participants were recruited by convenience sampling to participate in the seminar. The selection criteria for student participants were "at least 3 years of clinical experience" or "master's degree students". The group included clinical nurses about to enter graduate school, recent masters graduates, and those who wanted to learn nursing about ethics and PBL. Advertising was by poster and email. The purpose of the study and study methods was explained in a written explanation sheet, and all participants signed a consent to undertake the seminar and seminar evaluations. Participants were assured that pseudonyms would be used in reporting and publications and that personal details would remain confidential. Initially, 11 student participants commenced the online seminar, but one participant attended only one session, and the analysis includes only the remaining 10 participants' demographics, evaluations, and reflections.

Student participants had  $8.9 (\pm 5.9)$  mean years of nursing experience. Nine students had teaching experience of  $6.2 \pm 4.5$  years and had a master's degree or higher. Before the seminar, three student participants had experienced in nursing ethics, four had experienced using online resources, two had experience of PBL, however, no student participants had experienced learning nursing ethics online using PBL.

The mean years of nursing experience of nursing academics was  $12.0 \pm 11.7$ . Three of the group had previous experience teaching online, and four had experience teaching PBL. however, no staff participants had experience teaching had online ethics using PBL (Table 1).

## Data collection and analysis

The repeating process of planning, acting and observing, and reflection (Koshy, 2005) at the heart of action research guided the approach. Faculty members met online every two weeks starting in May 2020. Reflections were completed by faculty members after each meeting. In the initial two months, self-identified gaps in knowledge about PBL, effective online learning and the research methodology were addressed through literature review, presentations by Australian faculty members, and discussion. The following 6 weeks involved the development, refinement and evaluation of the online nursing ethics seminar comprising four 90-minute sessions. Recruitment of participants, rehearsal and evaluation took place between August and September 2020 and the four online PBL seminars were conducted be-

**Table 1.** Demographics

	Student participants (n = 10)	Faculty participants (n = 7)
Nursing experience (Mean, range)	8.9 (3–24) years	12.4 (3–35) years
Teaching experience (Mean, range)	6.2 (0–14) years	23.7 (20–31) years
License		
Registered Nurse	10 (100%)	7 (100%)
Registered Nurse–Midwives	1 (10.0%)	3 (42.9%)
Public Health Nurse	3 (30.0%)	1 (14.3%)
Others	Assistant Nurse (1)	Social worker (1)
Clinical Lab Technician (1)	School nurse (2)	
Nursing specialty		
Fundamental nursing	3	2
Adult nursing	1	0
Mental health	1	1
Pediatric nursing	1	1
Midwifery	1	1
Older care	2	2
Community nursing	1	0
Final education		
Bachelor	1 (10.0%)	0
Master	7 (70.0%)	0
PhD	2 (20.0%)	7 (100%)
Previous education experience		
Nursing ethics	3 (30.0%)	7 (100%)
Online education	4 (40.0%)	3 (42.9%)
PBL education	2 (20.0%)	4 (57.1%)

tween September 17 and October 9. Following each seminar, the faculty members analysed the data and met to discuss and evaluate the sessions. A research audit trail was kept by the principal researcher and collaborators to ensure transparency and auditability of the decisions made in relation to seminar design and researcher/participants' and students' reflections on the implementation of the ethics seminar.

A template was used to capture reflections from participants about the students' reported experience of the online learning platform and PBL and what was key learning and why it was important (Figure 1). The same template was used for both faculty participants and student participants. Written responses to questions in the template provided the qualitative data for the study. Reflections were transcribed verbatim and translated from Japanese to English by a bilingual researcher, then translated back into Japanese by another researcher to check that the translation was correct. Data were analysed using content analysis described by Thomas (2006). This inductive approach enabled themes to emerge from the raw data. First, two researchers (TES and KM) independently read the reflections several times to obtain overall

impressions and identify key content. Initial codes were generated and from these themes related to PBL, online learning, and teaching of nursing ethics were determined.

### Ethical Considerations

Explanations were given to faculty and student participants about study design, research methodology, purpose, method, anonymity guarantees, and the voluntary nature of participation before they consented. The research was approved by the Ethics Review Committee of Yamaguchi University Graduate School of Medicine approval number 62S-1 and conducted in accordance with the Declaration of Helsinki (2013, Fortaleza Amendment).

The need to commence the development of online teaching prior to ethical approval for the study meant that faculty members consented to participate in seminar development prior to formal ethical approval. All faculty involved in developing the ethics seminar consented to participate in the collaborative research process as well as the seminar development process.

	My own reflections	The group's	Comments
<b>what</b> —was the focus on and learning			
<b>so what</b> —why was it important –			
<b>now what</b> are the next steps and why these ones in this order?			

#### Example reflection

	My own reflections	The group's	Comments
<b>what</b> —was the focus on and learning	The focus this week was on the technological requirements for the on-line learning. I realize that I am not familiar with the software and need support.	Much discussion around technology but there is expertise within the group	
<b>so what</b> —why was it important –	We need to ensure that the IT supports our pedagogic strategies	Both faculty and students need easy access to the proposed platform	
<b>now what</b> are the next steps and why these ones in this order?	Need to do a fact finding before we develop activities further.	SS to approach IT service	

#### Worked example of the reflection template

**Figure 1.** A reflective worksheet and work example of the reflection template.

## Findings

Themes common to both faculty members and students emerged from the content analysis. These were *building on learning*; *participation and group engagement*; *facilitation versus expert delivery*; and *translation into practice*. Pseudonyms have been used to preserve anonymity.

## Building on Learning

The student participants learned about a series of thought processes, such as "clarifying issues based on ethical principles," organizing them, and considering intervention methods through group discussions of set cases and cases presented by them. The students reported that they learnt a lot and could engage in more detailed discussions that corresponded to "real" cases:

*Reviewing the case studies and the four-topics method, and ethical principles helped me see what information and issues needed to be ad-*

*dressed. I realized the effectiveness of using such principles and tools instead of vaguely thinking about them. (Lala)*

*The actual case study had a variety of individuals with diverse characters and a complicated relationship. (Shima) I felt like I was repeatedly repeating the same steps, but I felt like it was an essential process because I felt like actually repeating them helped me think in a broader perspective. (Momo)*

Faculty members also recognised the PBL process and related this to building knowledge for application as well as expressed their willingness to consider structures and content that allow student learning to build up:

*The steps of concretely assessing cases, examining ethical principles, and finding methods are essential for problem-solving. (Rin)*

*Understanding what students want to know and what is necessary for students is important. (Hina)*

Given PBL is designed to incorporate students' spontaneous problem-solving perspectives, some faculty members considered whether a framework would assist student's decision making but also thought that it might inhibit thinking:

*I have been using theoretical frameworks to teach ethical issues, but in PBL, students are free to use the frameworks they have learned. (Niko)*

*When thinking freely, I wonder whether to use a framework such as Jonsen's four-topics method .... On the other hand, that may hinder the free-thinking of students. (Yua)*

In the initial stages of the process, faculty members expressed discomfort in the form of anxiety about whether they knew sufficient about PBL:

*It's an educational method that I have never experienced before. (Yua)*

*I am not familiar with PBL techniques, so it is important to learn while doing it. (Rin)*

*I wonder how much information the lecturer/facilitator should provide to guide students to address problems. (Niko)*

At the development of the seminar, without previous experience of running PBL in this university, faculty members found it harder to plan the sessions, had concerns about student involvement, timing, and apparent lack of control. And as a result, rehearsed the sessions beforehand with the research team taking the role of students. Faculty members planned to give a lecture on the required content before the students' group discussion, but after the rehearsal, they modified their plan to focus on providing information online and group discussion. This led to the



following reflective comments:

*I found it challenging to use PBL effectively...I can't picture myself running a class for the amount of time I've been given. (Yua)*

*Since many things can only be learned through practice, rehearsals were held among members. (Niko)*

*To effectively use the seminar time, it is necessary to create a compelling atmosphere, and I learned that even a self-introduction should be related to the lecture and focus on the theme of the seminar. (Aoi)*

### Participation and group engagement

The value of being able to hear multiple perspectives on nursing situations and ethical viewpoints was appreciated by some students who were appreciative of the high level of education of their fellow students. The student participants drew on each other's experiences with the participating group members, recognized each other's diversity, and tried incorporate new perspectives:

*The group was able to exchange views on the status and experiences of past and current clinical experiences. The group members were a diverse group with a wide range of expertise. (Ai)*

*Group members took on the roles of moderator, scribe, etc., and made good progress. I sensed the high level of participants. (Kara)*

*I felt it was important to discuss in groups, as I found out that people have slightly different ideas based on their position and age. (Hanako)*

Drawing on participant's experiences, faculty members, adapted to PBL style and realized its strengths in student engagement and teacher ability to gauge student learning:

*Post-grad students have clinical experiences as nurses, and they already have encountered ethical issues in their practice, so asking questions in the PBL class encourages students to speak their opinions and experiences... (Yua)*

*I really know how we involve students in our seminar, such as asking a question. (Hina)*

In addition to comments about facilitation and interaction through engagement with a scenario as a group, student participants reflected on the use of the online platform for teaching:

*I felt that there were benefits to taking the course. I would not recommend it if someone were not comfortable with the online experience. (Momo)*

*I think online is a very effective way to present the materials and*

*view the presentations. I felt more comfortable participating online than in person. I would like to see more online sessions in the future. (Shima)*

and expressed some initial misgivings:

*Last time I felt embarrassed about being online and expressing my opinions in group work for the first time. (Ken)*

*There were people with different years of experience, and I felt a little uncomfortable speaking up at first. (Kim)*

The challenges in managing group discussions in the online environment because of the technology issues (such as the display of participants' screens) and the timing of comments, such as when to speak without interrupting others' conversation were highlighted:

*When we were sharing the screen, I was unsure when I was allowed to speak up because I couldn't see everyone's faces on the screen. (Nashi)*

*I want to be more active in speaking up and exchanging ideas next time, as time flies, when working in groups remotely, while I am observing. (Kim)*

Participants commented on the importance of online time management. Therefore, students became aware of the need to work on speaking "proactively", summarizing "appropriately", and creating "comfort" conducive to speaking to facilitate efficient online discussions:

*I thought that if I didn't actively participate in the discussion as part of the group, the group's opinions would only reflect some of the group's views. (Kara)*

*Since the time for group work is limited, I thought that if we learn to state our opinions straightforwardly and summarised, others will have more opportunities to give their views. (Momo)*

*I learned last time that in online seminars, it is essential to use voice and gestures and nodding to convey responses to others, and I realized this time it is important to try to give responses to others. (Ai)*

Faculty members also had initial misgivings about online, but these were overcome:

*I realized that communication could be established even online. (Yua)*

*I was impressed by the fact that we could connect and talk to people in Hyogo and Fukuoka prefectures because it was online. Participants seemed to adapt quickly to PBL and online. (Aoi)*

This changed to gradual growth in confidence:

*The session led by Prof. Yua was very smooth, and the participants spoke up a lot. The first day was a great success. There was not enough time to talk about each participant's ethical issues, but I think we can recover from that. (Niko)*

*In the case study, I asked lots of questions to the participants while communicating the PBL method. There were more comments than expected, and I felt that PBL was suited to ethics education. (Yua)*

### Facilitation versus expert delivery

Student participants linked the change in facilitation style to enhanced depth of discussion:

*I thought that the seminar was different from my previous experience in that the seminar instructor led the way, and the participants took the initiative to consider the issues and the solutions. (Kim)*

*I realized that it's not just about building up knowledge or training techniques, but it is interesting to learn processes and principles and apply them in practice. (Lara)*

*I feel that the online seminars provide an opportunity to exchange experiences with team members that I would not usually be able to attend, and I think the benefits of online seminars more and more with each session. (Ai)*

*Comparing the usual seminars at my workplace, to PBL, our ward ethics seminars are very short and do not lead us to in-depth discussion. Often there is no opinion from most of the participants. I want to learn more about the role of a facilitator in nursing practice, as I need to be a facilitator to get everyone to express their opinions. (Kara)*

The faculty members also studied and worked on implementing a "student-centered" teaching method to change their teaching style.

*I have to flexibly deal with and facilitate it based on the opinions given, not on a well-prepared lesson plan. (Yua)*

*One-way teaching does not result in secure knowledge and skills that can be applied in practice. It does not lead to consideration of ethical issues. (Niko)*

*The lectures that are delivered by the instructor are not suitable for PBL. Summarization is not done by the faculty but by the students who have learned. (Niko)*

However, the process was not always a satisfactory experience for the faculty members, especially when it came to the participants' case studies from clinical practice:

*One group did not ask questions, which is a basic technique of PBL. They seemed not to utilize the previous learning... To be honest, I was disappointed when I saw the case study progressing aimlessly. (Yua)*

*At the time of the group discussion, I may have overstated my opinion, and participants may have expressed their views but may not have a conclusion. (Rin)*

*It is always difficult to ensure that the participants have a common understanding of the current situation when discussing a case. (Aoi)*

In the initial stages of participation in the seminar, some students mentioned that they expected and wanted them to "fully engage in discussions. However, some groups found that group discussions did not work as well for them as they would have liked: when it came to concluding the cases they brought from their practice and recommending nursing actions:

*There's no correct answer, but we have to make a consensus on an intervention. (Fuyu)*

*I don't think there is a right answer to this question of nursing ethics, but I would like to think about what the nursing profession can do to complete the discussion. (Hanako)*

as well as when time was insufficient to engage in rich, in-depth discussion:

*The time was limited, but the same people spoke up during the group sessions, and I wish everyone could have spoken up a little more. There were times when I didn't even have a chance to give my opinion. (Fuyu)*

Faculty members decided to go back to the principles of PBL, reconfirm the goals of this seminar and communicate them to the students, and believe in the ability of the students:

*Next time, on the final day, we will review the basic method of PBL and then start the case studies. Follow-up training can be held, but it will not be dealt with unless it is an idea from the participants based on PBL. It will be a future theme. (Yua)*

*The conclusions of the group discussion may vary from participant to participant. We don't have to draw one conclusion. (Rin)*

*I felt the group discussion was a little bit different. But I expect they are adult learners, so they know what and how to do. (Hina)*

With encouragement and support from their colleagues, staff shared feelings of being reassured and confident in the PBL process:

*I'm glad I believe in the power of the group. I feel that the presentation exceeded my expectations. (Niko)*

*I felt participants developed rich ethical sensitivity. (Rin)*

*In my previous review, I was concerned that the content they had learned was not being utilized. However, participants' abilities to deal with ethical issues were undoubtedly maturing. (Yua)*

### Translation into practice

The majority of comments were related to the translation of PBL and online teaching into the broader practice of faculty as some students in the seminar were also faculty members, and the experience prompted them to reflect on their teaching, evaluating the experience both from the viewpoint of themselves as the student and as an educator. Their reflections noted the collaborative aspects of PBL and reflected a deepening understanding of the subject matter and technique as well as highlighting the value of working as a team of staff committed to collaborative learning and development of capability in PBL and online teaching. For example, members of the group initially, struggled with aspects of facilitating PBL and discussed it with other faculty members. Furthermore, faculty members also reflected on the important step of changing practice behaviours:

*I now think that online is useful because it fosters independence for those with a given level of motivation. Even if it was difficult for me to change my thinking (Yua)*

*I thought that asking students about their experiences, rather than teacher-led, and connecting their questions and emotional responses to their learning would motivate them to learn. (Aoi)*

*Planning and implementing this seminar has changed the style of my lectures. Teachers tend to want to conclude quickly, but students can draw their own conclusions, so minimal support is needed to prevent them from going in the wrong direction. (Niko)*

*I hope that the participants will apply what they have learned in their clinical and educational settings. The group members (students) continue to grow [develop] I expect the students to take what they have learned in the seminar back to their clinical practice or workplace and discuss it to deepen their understanding. (Niko)*

## DISCUSSION

According to Baume (2021) graduates need to be fluent in the five Cs: Creativity, Communication, Collaboration and Criticality and Competence (Baume, 2021). Baume highlights the difference between teaching, which usually involves telling students facts and information, and learning which involves using teaching methods, such as PBL, to cause students “to explain, to apply, to

critique, to combine into new forms, what they have been taught.” (Baume, 2021). Rapid advances in health sciences have led to content heavy nursing curricula leaving little space for learning how to critically think (Feller, 2018) and nurse educators should carefully consider adopting curriculum and teaching approaches that enhance lifelong learning.

### Effectiveness of PBL methodology in nursing ethics

The nature of applied ethics makes it eminently suitable to support the development of key learning competencies in post graduate nursing students as ethical situations necessitate exploration of different perspectives and justification of proposed actions and PBL provides a mechanism for achieving this in a facilitated, collaborative learning environment. An interactive situational e-learning system developed for undergraduate nurses in Taiwan was found to develop students' competence in ethical reasoning (Chao et al., 2017). In our study, the active role students described was effective in sharing experience and exploring different perspectives as well as exploring ethical issues in the stimulus material. However, a review of the global literature on the teaching of ethics suggests that lecture-style delivery is a popular way of teaching ethics (Avci, 2017). In most instances tangible cases are used to facilitate understanding and has been found to be useful by students and educators but the successful depends on the quality of the case used (Avci, 2017).

### Faculty and students' exposure to a PBL approach

Students entering new learning environments will have preconceived ideas about how that environment will function. Previous qualitative studies described nursing students' anxieties when beginning a PBL program (Klunklin et al., 2011). It has also been noted that when students encounter a new way of learning in higher education, they bring their previous experiences with them (Otting et al., 2010). In our study, students indicated ability to readily adapt to, and satisfaction with, the online seminar. Although this must be treated with caution because of the small numbers involved, this contrasts to the commentary about the 2020 worldwide move to online education which suggests that on the whole students across the globe were dissatisfied (Altbach & de Wit, 2020; Sun, 2020). It may be that as experienced nurses and post graduate students, students in this study were more familiar and better prepared for learning using practice-based scenarios and technology for communication than undergraduates might.

Despite case-based learning being effective Taiwan and Japan continue to use lecture-style teaching because students are said to feel uncomfortable in an interactive learning environment



(Lin, Lu, Chung, & Yang, 2010). Further, Marumayama and Uenoe (2010; p438) have asserted there are missed opportunities for teaching and learning in professional ethics courses as “difficulties in professional ethics education in Japan are caused by the fact that both teachers and students lack experience in leading and participating in discussion-based-classes and misunderstand the effectiveness of a case-based pedagogy”. In this study “comfort” was mentioned by several participants. Culturally, there may be a reluctance to ask a question for which the other may not have an answer and causing discomfort – thus PBL and similar pedagogies may be perceived as against traditional values of unquestioning acceptance of the teacher (Davies & Ikeno, 2011; Okada, 2016).

Our study has demonstrated that it is possible to implement PBL online rapidly when staff are actively engaged, supportive, open-minded, willing to change, adapt, reflect, and work collaboratively – i.e. model the behaviours of an effective PBL group as they seek to respond to a changing higher education context. The study has demonstrated that for faculty who participated in the online PBL ethics seminar design and implementation, there is a burgeoning paradigm shift among teachers from teacher-centered learning to student-centered cooperative group learning, and from expert-teaching knowledge to practice-based learning. This is a key difference between traditional instruction and PBL (Woods, 2003). In addition, staff also experienced working together to develop the seminar (i.e. their ‘real world problem’) in an online environment and had experience of inquiry process in action research beginning at the initial moment of the idea and continuing well after any formal research is complete (Reason, 2006) as they move to continuing and broadening their efforts to implement PBL online in the nursing courses at Yamaguchi University.

### Differences between online and face-to-face PBL

The pandemic created sudden dislocation, uncertainty and inconvenience (Pokarier, 2020) but the crisis has been seen as perhaps representing a transformative moment for online teaching across the globe (Altbach & de Wit, 2020). Further, referring to the rapid move to online learning and need to move academics into this modality, Sun (2020) remarked that “Teaching online is like asking people who know how to drive to fly a plane”.

In an online learning environment, students or faculty members have to keep their eyes on the screen and lecture within a narrow field of view. This makes it difficult to maintain concentration and to study for long periods of time. In other words, it is necessary to manage time effectively. On the other hand, such collaborative management of classes by students and faculty with

an eye on time can lead to effective learning of key skills. Students are expected to have the ability to listen intently to the opinions of other students, grasp the context, and summarize and express their own opinions effectively while thinking.

Altbach and deWit’s pessimism about “faculty of a certain age” lacking “both the experience and stamina to learn new and highly unfamiliar methods and technologies” (Altbach & de Wit, 2020) was also not realized. In our study, academics were able to rapidly adapt material that had been presented in a lecture and case study format. It did not take a lot of resources and training, adapted quickly and easily because of broad experience as teachers and in clinical environments. Their current clinical knowledge meant that the case study was rich in detail and authentic. All were highly experienced in teaching in a face-to-face setting but, as Kilgour et al. (2019, p.1416) described the move to online teaching was “deeply unsettling because [it] can run counter to the habits, conviction and experience gained in a non-online environment.” However, the response of staff in this study to the “supreme command” (Kato et al., 2020) to move to online teaching was to embrace the opportunity and aim to provide a quality experience for the students. When applied to online pedagogy in higher education contexts, academic staff become the learners as they extend their on-campus teaching knowledge into the online realm. In this setting, the identification of threshold concepts has the potential to inform the content of professional development (PD) programs for novice online teachers.

### Limitations

There were limitations to this study. Student and staff feedback was suggestive that the experience was a positive one. However, faculty members and student participants in the study were all volunteers and may have been more positively disposed toward PBL and online learning than others. We plan to apply the learning from this research to large-group classes in graduate and undergraduate courses.

## CONCLUSIONS

This paper has reported on the first foray into PBL and online learning by nurses as a group at Yamaguchi University. The study is small but nevertheless important in communicating our experience to others considering adopting PBL in online or face to face environments.

The process of implementing an advanced ethics seminar using PBL for graduate nurses in an online mode also entailed a parallel process of the PAR process itself being conducted via Zoom with the research team meeting only in an online environ-

ment due to the pandemic. As a result, participant academics perhaps emerged from this research process with new skill sets in PBL, action research, online teaching and online research collaboration.

In Japan there has been a recognition of the need for inquiry-based learning in secondary school education in order to transition to a knowledge-based future (Mikouchi et al., 2019). The term "active learning" has been used to improve university education since 2012 (Report of the Council of Education, August 2012), and problem-based learning, has been widely adopted. Although the need for critical thinking has been mentioned in nursing education in Japan for some time, teaching methods have not been consistent. Through the action research process, our experience was that the team rapidly adjusted to the online mode without a requirement to extensive training or expensive resources and plans to include an online PBL approach in future offerings of other nursing ethics courses at Yamaguchi University.

### Acknowledgements

The authors would like to thank all participants in the seminar for their valuable comments. This research was partially supported by a grant from 2020 Halla- Newcastle PBL Education and Research Center Research Funding.

## REFERENCES

- Altbach, PG., & de Wit, H. (2020). Are we at a transformative moment for online learning? Retrieved from <https://www.universityworldnews.com/post.php?story=20200427120502132> 21.1.2021.
- Avci, E. (2017). Learning from experiences to determine quality in ethics education. *International Journal of Ethics Education*, 2(1), 3–16.
- Baume, D. (2021). Why online higher education should be about learning, not teaching. University World News. Retrieved January 2, 2021, from <https://www.universityworldnews.com/post.php?story=20210126142422302>.
- Chao, SY., Chang, YC., Yang, SC., & Clark, MJ. (2017). Development, implementation, and effects of an integrated web-based teaching model in a nursing ethics course. *Nurse Education Today*, 55, 31–37.
- Cho, KC., & Shin, G. (2014). Operational effectiveness of blended e-learning program for nursing research ethics. *Nursing Ethics*, 21, 484–95.
- Conway, J., Little, P., & McMillan, M. (2002). Congruence or conflict? Challenges in implementing problem-based learning across nursing cultures. *International Journal of Nursing Practice*, 8(5), 235–239.
- Davies, RJ., & Ikeno, O. (2011). *The Japanese mind*: Tuttle Publishing.
- Feller, F. (2018). Transforming nursing education: A call for a conceptual approach. *Nursing Education Perspectives*, 39(2), 105–106.
- Goldie, J. (2000). Review of ethics curricula in undergraduate medical education. *Medical Education*, 34, 108–119.
- Jonsen AR, Siegler M, Winslade WJ. (2006) *Clinical ethics*. 6th ed. New York: McGraw-Hill; 2006:11.
- Kato, M., Saito, N., Matsushita, R., Ueno, M., Izawa, S., & Maruyama, Y., et al. (2020). Philosophy of education in a new key: voices from Japan. *Educational Philosophy and Theory* (pp. 1–17).
- Kember, D. (2002). Long-term outcomes of educational action research projects. *Educational Action Research*, 10:1, 83–104.
- Kilgour, P., Reynaud, D., Northcote, M., McLoughlin, C., & Gosselin, KP. (2019). Threshold concepts about online pedagogy for novice online teachers in higher education. *Higher Education Research & Development*, 38(7), 1417–1431.
- Klunklin, A., Subpaiboonid, P., Keitlertnapha, P., Viseskul, N., & Turale, S. (2011). Thai nursing students' adaption to problem-based learning: A qualitative study. *Nurse Education in Practice*, 11(6), 370–374.
- Koshy, V. (2005). *Action research for improving practice: A practical guide*. Sage.
- Leppa, CJ., & Terry, LM. (2004). Reflective practice in nursing ethics education: international collaboration. *Journal of Advanced Nursing*, 48(2), 195–202.
- Lin, CF, Lu, MS, Chung, CC., & Yang, CM. (2010). A comparison of problem-based learning and conventional teaching in nursing ethics education. *Nursing Ethics*, 17(3), 373–382.
- Marumayama, Y and Uenoe. (2010). Ethics Education for Professionals in Japan: A Critical Review. *Educational Philosophy and Theory*, 42(4), 438–447.
- Maxwell, BR. (2020). Problem-Based Learning (PBL) in a Grade 11 world history class: Trials, tribulations, and triumphs. *Journal of Problem- Based Learning*, 7(1), 11–20.
- Mikouchi, KA., Akita, K., & Komura, S. (2019). A critical review on project-based learning in Japanese secondary education. *Bulletin of the Graduate School of Education, the University of Tokyo*, (58), 373–385.
- Okada, R. (2016). Conflict between critical thinking and cultural values: Difficulty asking questions and expressing opinions in Japan. *Asian Education Studies*, 2(1), 91.
- Otting, H., Zwaal, W., Tempelaar, D., & Gijssels, W. (2020). The structural relationship between students' epistemological beliefs and conceptions of teaching and learning. *Studies in Higher Education*.

- ucation, 35(7), 741–760.
- Pokarier, C. (2020). Crazy COVID online education bonanza. Retrieved from <https://pokachan.wordpress.com>.
- Reason, P. (2006). Choice and quality in action research practice. *Journal of Management Inquiry*, 15, 187–203.
- Schumann, J. H., & Alfandre, D. (2008). Clinical ethical decision making: the four topics approach. *Seminars in Medical Practice*, 11(1), 36–42.
- Schröder-Bäck, P., DuncanSherlaw, P., Sherlaw, W., Brall, C., & Czabanowska, K. (2014). Teaching seven principles for public health ethics: towards a curriculum for a short course on ethics in public health programmes. *BMC Medical Ethics*, 15, 73.
- Sun, T. (2020). How to create effective learning for students online. Retrieved January 23, 2021, from <https://www.university-worldnews.com/post.php?story=20200515072512826>.
- The Central Council on Education of the Ministry of Education, Culture, Sports, Science and Technology (MEXT). Toward a qualitative transformation of university education to build a new future (Report). (2012) Retrieved February 23, 2021, [https://www.mext.go.jp/b\\_menu/shingi/chukyo/chukyo0/toushin/1325047.html](https://www.mext.go.jp/b_menu/shingi/chukyo/chukyo0/toushin/1325047.html) (in Japanese).
- Thomas, DR. (2006). A General Inductive Approach for Analyzing Qualitative Evaluation Data. *American Journal of Evaluation*, 27(2), 237–246.
- Tsuruwaka, M. (2018). Educational challenges in teaching nursing ethics: Perspectives of educators in Japan. *Journal of Nursing Education and Practice*, 8(10), 152.
- Tsuruwaka, M., & Asahara, K. (2018). Narrative writing as a strategy for nursing ethics education in Japan. *International Journal of Medical Education*, 9, 198.
- Woods, D. R. (2003). Preparing for PBL: McMaster University Hamilton, Ontario.
- Wosinski, J., Belcher, AE., Dürrenberger, Y., Allin, AC., Stormacq, C., & Gerson, L. (2018). Facilitating problem-based learning among undergraduate nursing students: A qualitative systematic review. *Nurse Education Today*, 60, 67–74.
- Zhang, F., Zhao, L., Zeng, Y., Xu, K., & Wen, X. (2019). A comparison of inquiry-oriented teaching and lecture-based approach in nursing ethics education. *Nurse Education Today*, 79, 86–9.