Managing a Teaching Technologies Assimilation Program at Nursing School in Israel

Yael Tal Hof
Tel Aviv University, Holon, Israel

The nursing field is constantly evolving and therefore nurse educators are constantly asked to be updated with relevant knowledge. The nurse educator’s role in Israel is to teach and develop the nursing profession in the future generation. This role brings many and varied challenges, one of which is the inter-generational gap. It is not a simple challenge to be interesting, innovative, and creative for the future generation. The nurse educators in Israel who train and educate the nursing future generation hold a master’s degree and graduate advanced courses in selected clinical areas and they move from the clinical field to teaching in order to influence and shape the future generation. This role holds great responsibility for Israeli nurses and it requires professionalism. There are 23 nursing training institutions in Israel. Some operate in nursing schools and some in academic institutions at universities and colleges. The students are adults at 18 years and older; they study in several study courses so the nurse educators must know how to adapt teaching to all study courses. The intergenerational gap and technological advancement are some of the influencing factors on teaching interesting, motivating, and inspiring lessons. In one of the academic nursing schools in Israel, nurse educators had a designated training program in which they learned how to integrate technology in teaching to make the lessons more interesting and thus to bridge the intergenerational gap. The article’s goal: To describe an intra-organizational training procedure for nurse educators’ staff in academic nursing school in the center of Israel, from learning to implementing selected technologies in class to innovate and stimulate interest and motivation among the nursing students.

Keywords: nurse educator, inter-generational gap, technologies in teaching, X,Y,Z generation, action research

Introduction/Literature Review

There are 23 nursing training institutions in Israel. This profession went through academization process in the 1990’s and is taught in colleges and universities (Nursing Administration, August 13, 2019).

Nurse educators in Israel are registered nurses holding a master’s degree and up who came to the training centers including nursing schools from the clinical field to teaching and influence the shaping and leading of the future generation. These nurse educators face many challenges. Some of those challenges are teaching and making lesson plans. Teaching process is not simple. The leading teaching methods in nursing schools are lecture, simulations, PBL etc.

The students in the nursing training centers are adults who study various study programs as: a 2.5 years first degree military academic course, a four years first degree academic course, and a 2.5 years academic retraining course and a generic certificate course program in a unique program of 2.5 years (Work Plans

Yael Tal Hof, M.H.A (Nurse Educator), Wolfson Academic Nursing School, Tel Aviv University, Holon, Israel.
The students are in age’s range of 18 to 60+ and are in different generations:

The X generation: a generation born in the 1960’s and 1970’s, characterized as a settled generation willing to invest in his work; a generation that is loyal to the company.

The Y generation: a generation born in the 1980’s until mid-1990. It has been said that this generation thinks only about himself, not loyal to the company or the organization in which he works (Csobanka, 2016; Almog & Almog, 2013).

The Z generation: young people who born in the beginning of the 2000’s (study in the military academic reservation framework); the millennium generation; a technologic generation who excel in using and applying variety of technologic means like the internet, social networks, and cellular communication. Using their technologic knowledge, they create personal, social, and professional relations in the real world. This generation has quick understanding and as soon as they get the idea, they quickly get bored, impatient and move on (Avman & Levi-Zeira, 2014).

Since each and every generation has different characteristics and perceptions, it may cause high variability, resulting in conflicts, misunderstandings, and disinterest. The younger and contemporary generation see the older generation as dinosaurs and old-fashioned unconnected to the new and advanced world (Geffen, 2018). This gap is reflected in every home between parents and children and of course in the nursing training system.

Today, in most higher education institutions, frontal teaching is predominant. The method’s advantages: enables structured knowledge transfer, saves time and financial resources; allows organizing the information and presents it in a logical order from light to hard, basing previous knowledge bodies (Mahalav, 2003).

Harpaz (2000) claims that teaching is a communicative, structured, and continuous set of educator activities designed to stimulate or create learning experiences to the student.

Technological development and its entry to education affect us and our daily conduct. Many teachers claim that lecturers must face this challenge. Today’s students grew in a technological era (Hativa, 2016). The technological diversity existing today for educational activities is diverse in many areas: writing, communication, visualization, learning games (Ministry of Education, September 13, 2018). It was found that using technologies stimulates interest and motivates the student in class. Therefore, the nurse educators and the students must know and assimilate these technological tools in class (Arkorful & Abaidoo, 2015).

The Research

Type

Action research qualitative research. This research is usually performed by educators and practitioners. In this type of research, the researcher examines the field he works in and tries to build space new meanings and enable change processes. The researcher tries to understand the problem source and define it by a research that its result is a grounded theory. The research insights lead the researcher to change the system and examine the change’s benefit (Creswell, 2014).

Problem

There is an inter-generational gap in the nursing training frameworks in Israel. Most of nurse educators who train the future generation are part of the X generation and some are of the Y generation. However, the training frameworks students are the X, Y, and Z generations. Since the nurse educators have to be constantly
updated in the relevant professional knowledge, they must also learn and know updated teaching methods and different technologies that support teaching.

**Goal**

Managing an intra-organizational training procedure for nurse educators’ staff in nursing school, where the staff will learn, implement, and integrate technological tools in lectures and classes.

**Target Audience**

Eighteen nurse educators from academic nursing school in Israel.

**The Characteristics of the Nurse Educators’ Staff**

The characteristics of the nurse educators’ staff are listed in Tables 1-3.

**Table 1
Describe the Participate Age**

<table>
<thead>
<tr>
<th>Age groups</th>
<th>Num of colleges</th>
<th>Percent</th>
<th>Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>35-39</td>
<td>4</td>
<td>22%</td>
<td>Y</td>
</tr>
<tr>
<td>40-45</td>
<td>6</td>
<td>33%</td>
<td>X</td>
</tr>
<tr>
<td>46-50</td>
<td>4</td>
<td>22%</td>
<td>X</td>
</tr>
<tr>
<td>51-55</td>
<td>0</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>56-60</td>
<td>3</td>
<td>17%</td>
<td>X</td>
</tr>
<tr>
<td>Over 60</td>
<td>1</td>
<td>6%</td>
<td>X</td>
</tr>
</tbody>
</table>

**Table 2
Describe the Participate Gender**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Num</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>1</td>
</tr>
<tr>
<td>Women</td>
<td>17</td>
</tr>
</tbody>
</table>

**Table 3
Describe the Participate Education**

<table>
<thead>
<tr>
<th>Degree</th>
<th>Num</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA</td>
<td>12</td>
</tr>
<tr>
<td>PhD</td>
<td>6</td>
</tr>
</tbody>
</table>

**Objectives**

1. Professional intra-organizational training by a leading team.
2. Exposing the staff to variety of advanced teaching/learning technologies.
3. Planning the assimilation stages with content experts in the training staff by: needs assessment, planning, and implementation.

**Advantages**

The advantages are listed in Table 4.

**Disadvantages**

1. Depending on computer and internet.
2. Requiring infrastructures supporting the technologies.
3. Excessive use of technologies leads to missing the learning goals.
4. The lecturer does not know to solve technological malfunctions if occur.
5. Waste of time in class (to connect/receive).
6. Students’ loss of interest/boredom.
7. Focusing on technology instead of content (focus on the method).

Table 4

<table>
<thead>
<tr>
<th>Describe the Advantages</th>
<th>For the staff</th>
<th>For the students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The staff know how to use updated variety of technologies</td>
<td>Active and interested students</td>
</tr>
<tr>
<td></td>
<td>More interesting and curious lectures</td>
<td>Remembering the subject</td>
</tr>
<tr>
<td></td>
<td>Active students</td>
<td>Bringing the lecturers generation and the students generation closer (intergenerational gap)</td>
</tr>
<tr>
<td></td>
<td>Saving time during lecture</td>
<td></td>
</tr>
</tbody>
</table>

The Method

There is a graduated intervention process by the Kirkpatrick and Kirkpatrick (2016) guiding programs’ planning model.

![Assessment of training needs](image)

**Figure 1.** The four stages of training process. Kirkpatrick and Kirkpatrick (2016).

The Implementation Stages

1. Assessment of training needs.
   An initial meeting with teaching technologies content expert and a nuclear group of six nurse educators. This meeting included:
   - Describing the current school learning plan in the generic study courses including academic and academic retraining.
   - Planning and spreading core plans on the board.
   - Raising possible difficulties in the learning process as: problems in time, desire to assess students’ knowledge during learning, performing surveys, students who do not repeat the previous lesson study material, students who do not remember material based on a previous course like anatomy and physiology and a repeat is required.

   The meeting’s outcomes were written on the board as a scheme describing the outcomes beside the technologies which match the needs. Five relevant technology types, which meet the staff’s needs, were formed by the end of the meeting.

2. The learning stage.
   Goal: to teach the nurse educators staff the selected technologies meeting the staff’s needs.
   The team was divided to two work groups with the computer in the school’s computer room. Each team
member set in front of a computer with a matching guiding book in which the content expert (instructor) presented general information regarding the technological tool and then there was an exercise.

The learned tools are Mentimeter, Collaborative Board (Padlet), advanced search on YouTube and Google, creating collaborative files on Google Doc.

In this stage, there was an open discussion of the team and the instructor:

- Smartphones were used in the workshop. Each participant sent an activity to another participant in the group as questions and surveys were performed.
- The team asked questions about: (a) Technique “and if it will fail in class?” “How long will be spent to enter the software?” (b) Questions regarding the technology essence as: where and how to save the survey. The idea of a “cloud” which replaces the USB drive was not always understood.
- After introducing each tool there was a discussion regarding the activity and lessons; the tool may be used in order to understand and know each tool’s potential.

Problems that were found during the process: Some Google software were blocked due to information security in the computers of the hospital in which the nursing school operates. Therefore, there was no option to implement all the studied tools and some of the tools were only presented in terms of: nature, advantages, and disadvantages and the staff could not operate and feel the tool.

The participants’ responses: Some of the participants began to try and “play” with the technologies. Some succeeded and had strong desire to continue trying it in class. Some theoretically planned what technology will match the teaching content. There was some independent work and enthusiasm.

3. The implementation stage.

By the end of learning days, each nurse educator had to try and assimilate two tools of her choice out of learned tools. The selected tools must be implemented in class.

As part of the assimilation process the instructor is available to the nurse educators by the phone or e-mail for comments and difficulties. Before starting this stage, each nurse educator will fill out a structured form that will list and detail the reason for choosing the digital tool, and what she wants to achieve using this tool in techno-pedagogical term and will personally reflect the process after implementing the tool.

This stage was about eight months long—each participant in his own pace.

4. The evaluation stage.

The teaching staff meeting with the content expert was divided in two:

Part I—the instructor invited the participants to share and answer the following questions:

1. Which tool did you use?
2. How was the experience?
3. What were the barriers/difficulties?
4. What would you do different?

The team freely answered the questions. Most of the used tools were: Mentimeter, Collaborative Board, inserting videos in presentations.

The experiences shared were:

(Participant No. 9) “I began with the Mentimeter in the drug therapy management course as a summary of the course and knowledge examination. At the beginning, I had a hard time and trouble with the computer. I arrived to class and couldn’t remember the password and it was embarrassing ... but the second time I did that. I came ready with the password and operated the questions to the students and explained them it their
opportunity to see their knowledge status. At first only few students participated, but then more and more students joined. The discussion after each question I gave was fruitful...”

(Participant No. 9) “An additional tool I used two month ago is a video from the Grey’s Anatomy dealing with conscious choice and free choice ... I sent the students the link to the video and the next day in class we held a discussion. I did kind of reverse class ... not all the students saw the video but it didn’t bother me and I held the discussion I wanted ...”

(Participant No. 5) “I used Mentimeter in a 100 students class... it was not simple... it was also the first time I used this tool and I had to explain the students how to use the application in their smartphones. Some got it quickly and some needed help. At the beginning it took time... there were also bugs and some of the smartphones did not show all the options... I have got over it by telling some of the students to work with others”.

(Participant No. 5) “The second time I used Mentimeter was in another class as a summary of previous lesson...the students were enthusiastic and wanted more... it is a matter of culture ... the more time you use in technology, this “language” is familiar to both the lecturers and students.

(Participant No. 4) “I teach breath with Meira and we prepared rehearsal questions in some of the subjects to show the knowledge level... we also inserted videos to the presentations for illustration...the very fact it was required and we had to prepare it. It opened us up to learn the tools and know it...”

(Participant No. 6) “I thought I am a technological person but I found out that I am not so much ... It took me a while to prepare all the materials. I did not do it yet in class and I wonder what will happen, but as I hear here there might be bugs even though I tested the tool earlier and may forget until I operate the tool in class... I made an instructions presentation for myself”.

(Participant No. 14) “I am a non-technological person. I connect with a phrase that came up here for the first time in front of a norm... If it is not embedded in the organizational norm, I will not do it if it is not required... I do not feel I miss it, but since I had homework, I found some tools that can help me, like applications and videos in clinical content, but there is a problem that my computer does not support Google. Form so, it was very easy for me to give up. I also had a difficulty in working alone. I am a person who needs close guidance and direction. I am a person who must be in control...I cannot stand in class and ask for help. I also do not know which tool might suit me to which subject. For me, using a presentation is enough”.

(Participant No. 14) “I used the Collaborative Board with the 1st year students asking about the nursing professional reserve... it was very nice and interesting to hear them. It helped the students to open up since it was anonymous and was thrilled I succeeded”.

(Participant No. 11) “I also have difficulties with technology and want a tight guidance... I do not know what my barrier is, lack of knowledge or lack of experience... it makes me insecure”.

(Participant No. 16) “I used Mentimeter in ethics class and I presented an event to the students and they had to grade the event by its moral level by scoring. Then I divided the students to groups and they had to grade the event as a group. They saw the gaps in their individual grading, since each one of them graded by his moral and the values he grew up with, but as part of a group the values are influenced... it was a really good experience... in this exercise we cleared the terms values, norms and agreement. I am favor of technology and will continue with it”.

(Participant No. 7) “I do not use Mentimeter due to the slides limitation. It confuses the students, so I have decided to put the exercises as part of a PPT presentation and animate... there is a discussion in class”.

(Participant No. 7) “I use the Collaborative Board as part of the critical reading classes... this tool enables
sharing and therefore stimulates thinking... I also use videos in each lesson but the problem is that not in each class the video works and it is annoying...”

(Participant No. 12) “I am a very technological person but not techno-pedagogic. I use Cahoot for few years to review the subject and it is like a game at the end of the course and it is very nice. I did not think to use Collaborative Board in class because I do not understand the meaning...after all, I am in class listening to the students. I thought using it when the students are at home before learning in class...soon I will have rehearsals I may use it”.

Part 2—dealt with how to proceed: How do you think we should proceed?

(Participant No. 4) “Most of us used the Mentimeter, so we should buy the software and give everybody a chance to experience it and repeat the summarizing feedback”.

(Participant No. 9) “I would like to practice more tools...I would like to have escorting and guidance, maybe in a smaller and relevant team”.

(Participant No. 11) “I have technologic need for the student and pedagogic knowledge for me and I have to match the right tool to the class... I want tight escort... the courses I teach are in thinking development and not so clinical subjects... I need help in this...”

(Participant No. 13) “I want to study tools that will develop the student’s individual learning...”

(Participant No. 14) “If we will continue and take it forward we will lose it and it is a shame... I have to be leaded in this change since I do not need the change unless it is an organizational requirement...”

(Participant No. 16) “I agree to continue only if as a lecturer I will see it has a value to continue learning otherwise it will be lost...”

(Participant No. 6) “I remember that my colleague came out thrilled from class after she managed operating the tool in class and it inspired and empowered me...”

**Summarizing**

The fillings the staff shared follow their experience showed motivation, seriousness, and a desire to learn and experience.

- The workshop raised the awareness and experience using a small part of technologic tools in teaching.
- The implementation stage of the process led to change in the staff’s behavior. The process caused the staff to go out of its comfort zone and experience threatening technologies.
- The process requires suitable organizational preparation as improved computer infrastructure.
- There was a suggestion to buy the technologic tools as a school’s permanent resource and not settle with a small and limited free software.
- It came out in the meeting that good experience creates a desire to continue experiencing a tool, while a lesser experience causes deterrence and leaving, therefore, a closer escort is required for some of the staff.
- The staff has a strong desire to keep and develop the intervention results in the organization.

**Conclusions**

To promote relevant subjects in the staff training, it is important that the management level will be attentive to the employees’ level since they should act and implement the changes and progress.

Collaboration at all the organization’s levels brings uniformity and even reinforces the collective need for organizational change.
Future Recommendations

1. Beyond learning the new subjects, there is a need to make sure there is an appropriate organizational infrastructure which supports and allows the change, i.e., a stable computerized system that supports the digital tools and allows its application in all classes.

2. To promote and preserve the change in the organization, there is a need to speak the professional language in daily conversation and sometimes even give the organization’s personnel a professional escort that will help them in new problems raised or even support staff members who had a previous unsuccessful experience or were afraid to experience.

References


Kirkpatrick, J. D., & Kirkpatrick, W. K. (2016). *Kirkpatrick’s four levels of training evaluation*. Danvers, MA: Association for Talent Development

