Meeting safety needs through virtual reality apps

Safety✚Nurses

Risk awareness & safety for nurses

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 IOS   Andriod

Introduction

The undergraduate nursing curriculum is discipline-driven. Some studies found that the use of flipped classroom may help to promote active learning (Missildine et al., 2013; Hamdan et al., 2013).

Aims

This project aims to (1) develop micro-modules to facilitate flipped classroom implementation; (2) evaluate students' perception and satisfaction towards the developed micro-modules and flipped classroom teaching in a first-year nursing course, "Fundamentals of Nursing I".

Methods

With support from a Micro-module Courseware Development Grant, four micro-modules that cover two major topics were developed. The 2 topics include:

1 Meeting safety needs

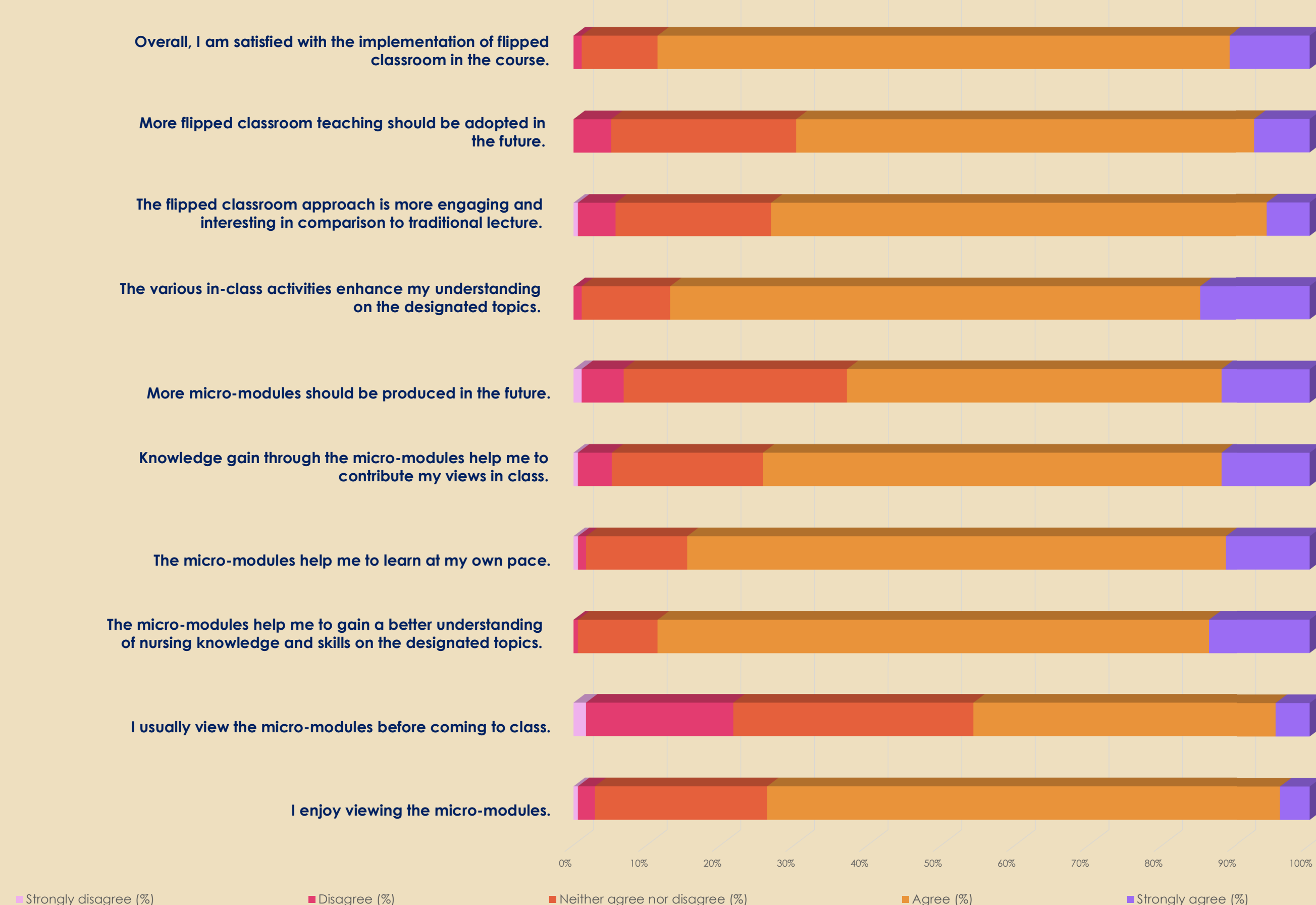**2** Ensuring a safe and comfortable environment for care

Results

The project has been evaluated by
1. student surveys   2. qualitative interviews.

Satisfaction with micro-modules and flipped classroom

167 students responses (79.1%) were received.

- Overall, I am satisfied with the implementation of flipped classroom in the course.
- More flipped classroom teaching should be adopted in the future.
- The flipped classroom approach is more engaging and interesting in comparison to traditional lecture.
- The various in-class activities enhance my understanding on the designated topics.
- More micro-modules should be produced in the future.
- Knowledge gain through the micro-modules help me to contribute my views in class.
- The micro-modules help me to learn at my own pace.
- The micro-modules help me to gain a better understanding of nursing knowledge and skills on the designated topics.
- I usually view the micro-modules before coming to class.
- I enjoy viewing the micro-modules.

Strongly disagree (%)   Disagree (%)   Neither agree nor disagree (%)   Agree (%)   Strongly agree (%)

The animation is enjoyable because it helped us to 'visualize the steps' in performing fall assessments for the patients
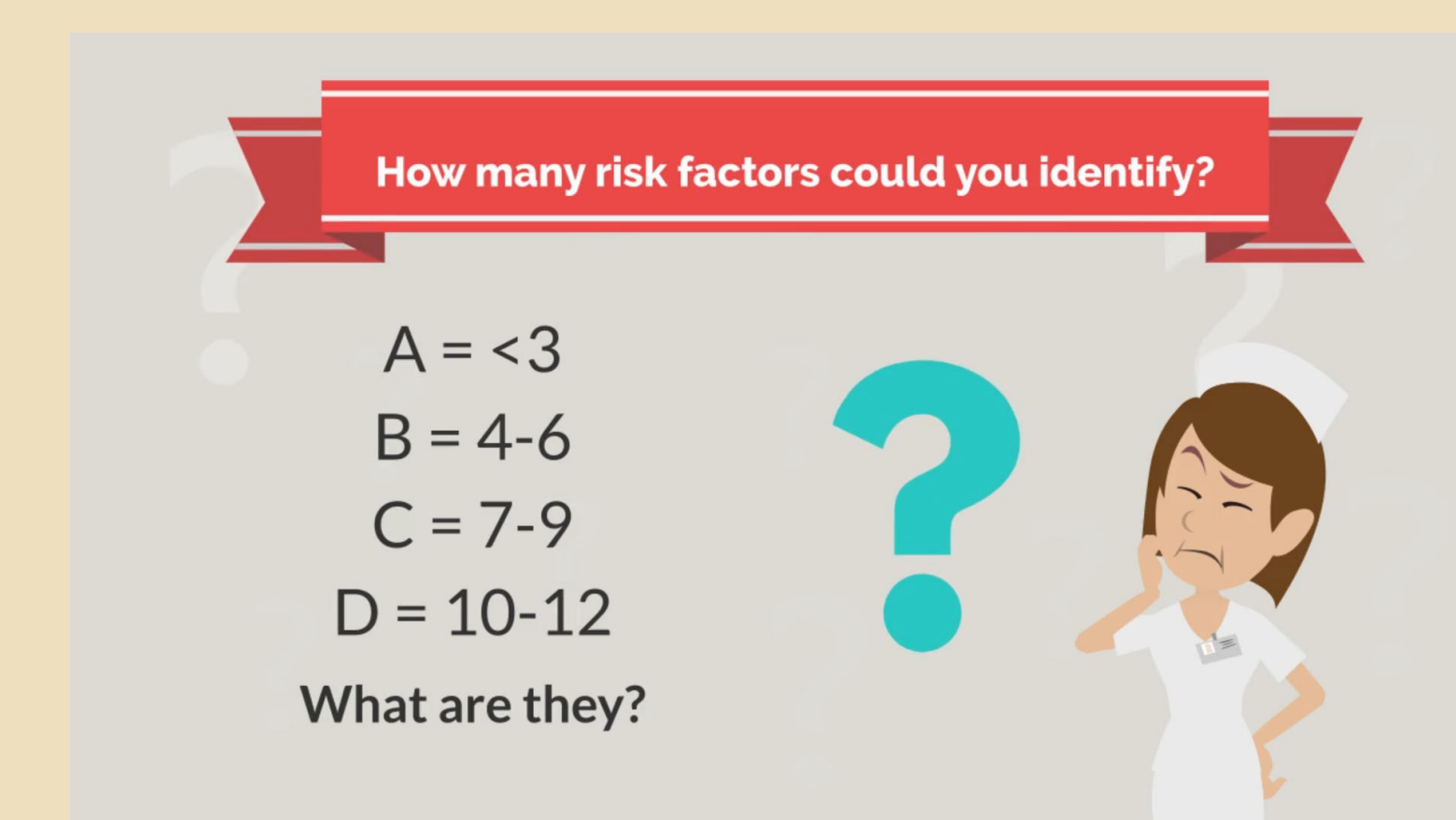
This new approach is good for our learning

It is very interesting and entertaining

Qualitative interviews

Micro-modules

MMCD 1: Identify intrinsic factors for fall

How many risk factors could you identify?

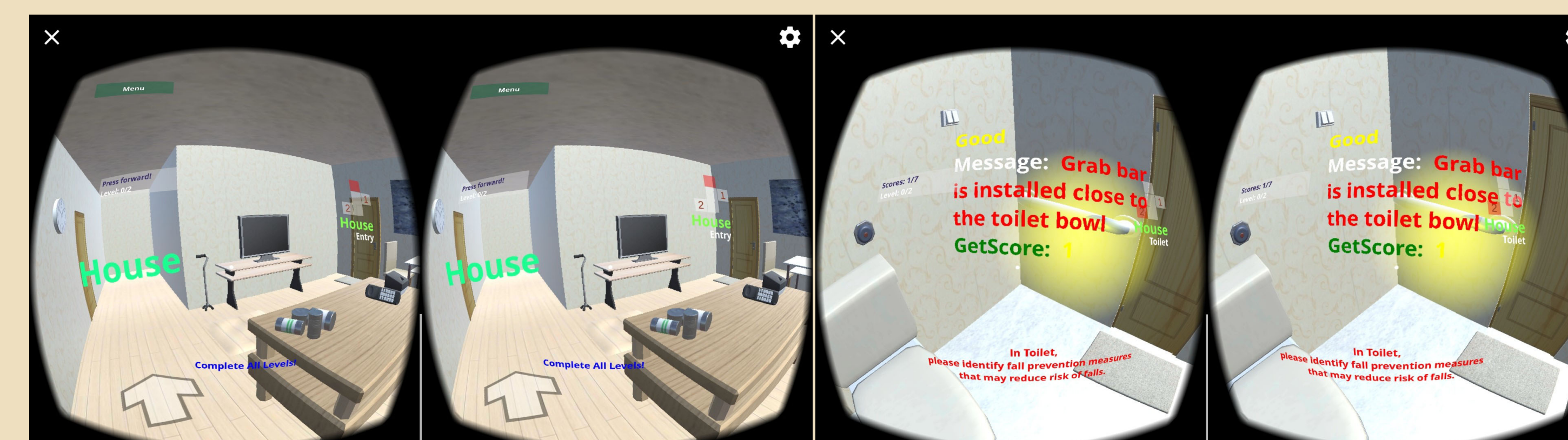A = <3
B = 4-6
C = 7-9
D = 10-12
What are they?

A four minutes cartoon animation with cartoon character (83-year-old lady) presented with various problems. Students were required to identify her intrinsic factors for falls.

MMCD 2: Conduct fall risk assessment

A five minute animation to guide students step-by-step in conducting the "Morse Fall Scale" for a patient.
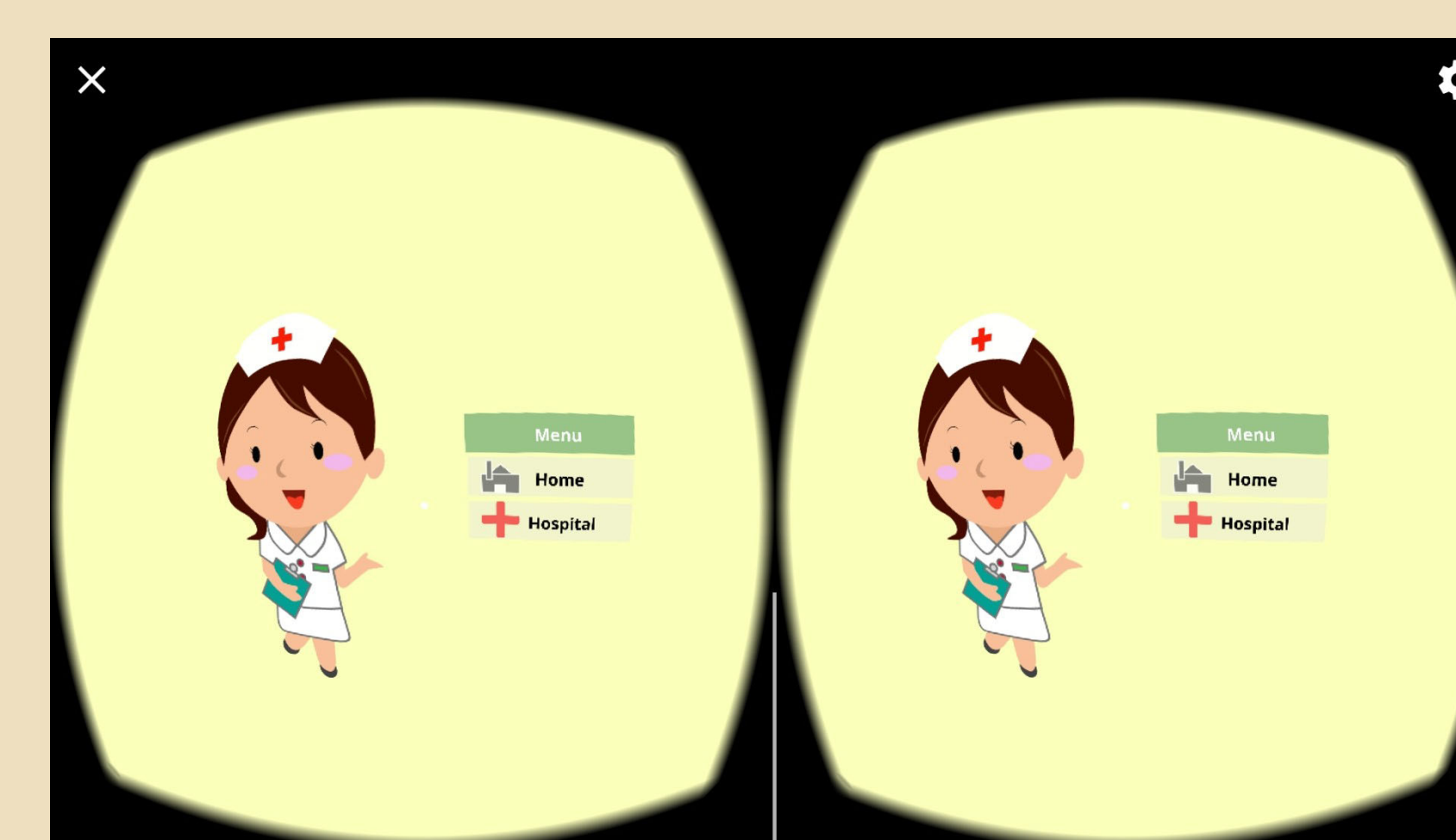
Yes, I have high blood pressure and high blood glucose level as well.

Do you have any chronic illness?

MMCD 3: Identify extrinsic factors for fall in home setting

MMCD 4: Identify various risks that threatened patients and health care providers' health in hospital setting

Both presented in the VR application which included a virtual home or hospital environment.

Conclusions

The evaluation indicated that the project has achieved its objectives effectively and completely. The findings help to motivate teachers to develop micro-modules and use flipped classroom approach in other courses.

References

Hamdan, N., McKnight, P., & Arfstrom, K.M. (2013). The flipped learning model: A white paper based on the literature review titled a review of flipped learning. Retrieved from http://www.flippedlearning.org/cms/lib07/VA01923112/Centricity/Domain/41/WhitePaper_FlippedLearning.pdf

Missildine, K., Fountain, R., Summers, L., & Gosselin, K. (2013). Flipping the classroom to improve student performance and satisfaction. Journal of Nursing Education, 52, 597-599.