

AN INSIGHT ON FINAL YEAR MEDICAL STUDENTS' VIEW ON INTERACTIVE ELEARNING

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TEACHING UNDERGRADUATE ANAESTHESIA

- ⦿ Final-Year Students attend a 2-week module
 - 40 weeks of Medical & Surgical clinical attachments
 - Split into 16 groups of 7-10 students
- ⦿ Difficult to cover syllabus & Essential topics often missed
 - Suitable clinical cases not always available

TEACHING UNDERGRADUATE ANAESTHESIA

- E-learning used to supplement clinical teaching
- Introduced two types of Virtual Patient on course
 - Summer 2006:
Formative Assessment Case Studies (FACS)
 - Summer 2008:
Story-line Virtual Patient (VP)

What is a VP?

Virtual Patient

- “specific type of computer program that simulates real-life clinical scenarios; learners emulate the roles of health care providers to obtain a history, conduct a physical exam, and make diagnostic and therapeutic decisions”

Association of American Medical Colleges

What is a VP?

Virtual Patient

- ◎ Many formats described:
 - Interactive clinical cases (FACS)
 - Anatomical Virtual Patients
 - Longitudinal Virtual Patients (Storyline VPs)

What is FACS?

Formative Assessment Case Studies

- ◎ Short **interactive** cases
 - 20-30 min to complete

- ◎ Usually focus on a single topics
 - e.g. Peri-operative management of Diabetes

What is FACS?

Formative Assessment Case Studies

- ⦿ Network of interlinking web-pages
 - A series of decision steps (n= 9-13)
- ⦿ Student progresses by answering questions correctly
 - Mostly MCQ about the case scenario
- ⦿ Feedback for wrong selections (i.e. Formative)

FACS Administration

Case Management

[Cases](#) - [Add Case](#) - [Delete Case](#)

[Student Management](#)
[Case Management](#)
[Admin Management](#)
[Results](#)
[Admin Log](#)

[Change Password](#)

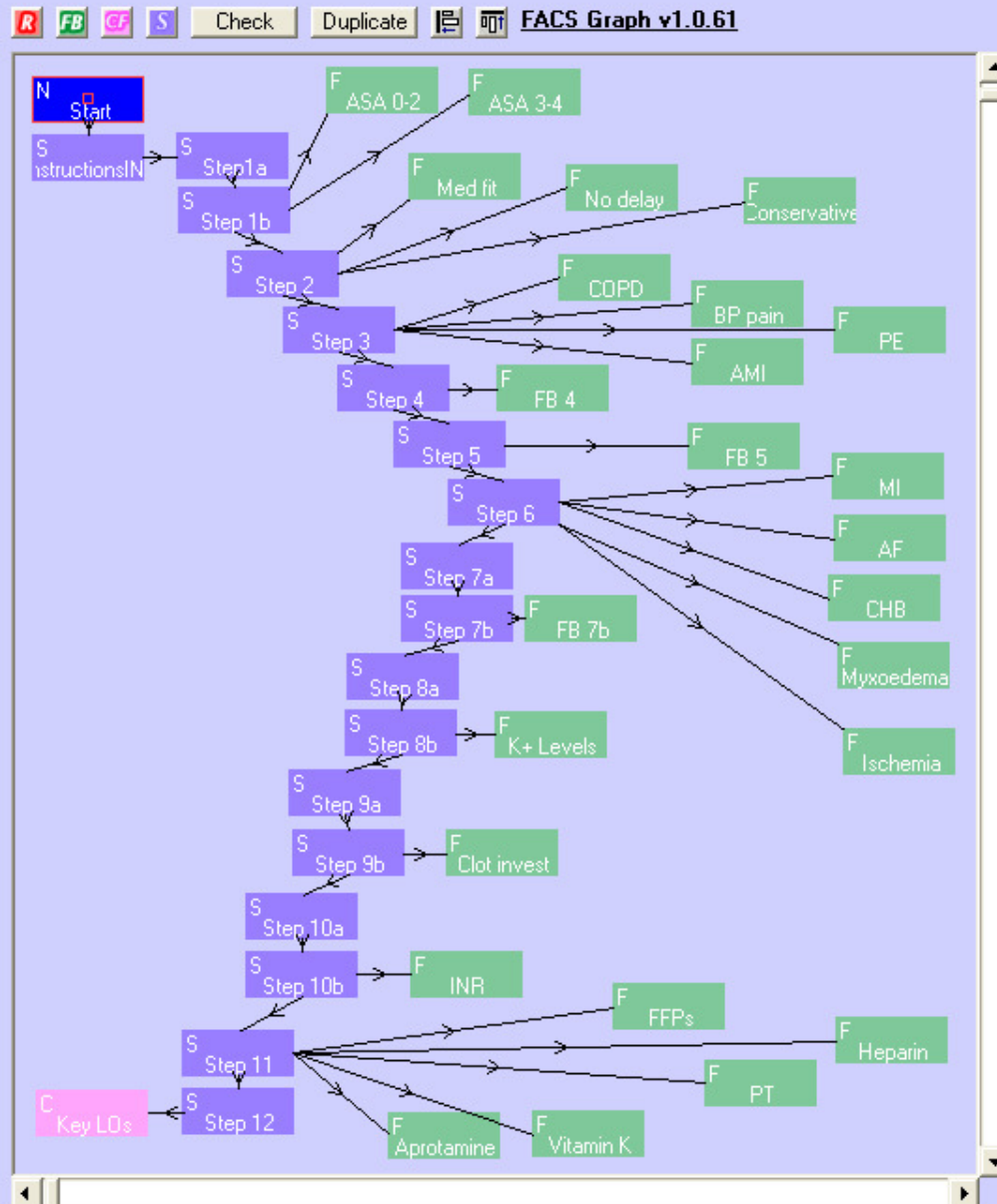
[Help](#)

[Logout](#)

Welcome Lester!
 System Administrator


5/14/2009 2:41:33 PM

FACS v1.0.47




Start	
Case ID	157
Case Name	Laboratory data
Category	Anaesthesia
Description	An elderly woman has a traumatic hip fracture. To be done in week 1
Activated	<input checked="" type="checkbox"/>
	<input type="checkbox"/> Workshop Group <input type="checkbox"/> Surgery C - Group 4 <input type="checkbox"/> Group 8 <input type="checkbox"/> Surgery B - 8AB <input type="checkbox"/> Surgery B - 8CD <input type="checkbox"/> Guests <input type="checkbox"/> Test <input type="checkbox"/> Med5210WBSA <input type="checkbox"/> DemoGroup <input type="checkbox"/> Virtual AE <input type="checkbox"/> Workshop Virtual AE <input type="checkbox"/> ENT - Med 5 <input type="checkbox"/> Public <input type="checkbox"/> Traditional Chinese Medicine <input type="checkbox"/> FACS Tour <input type="checkbox"/> Student Result Logging <input type="checkbox"/> ORT

Example of FACS Web-Page: *Typical Decision Step*



ANAESTHESIA FACS CASES



FACS Med5 Two-Week Module - ANAGuest

Score

0%

Case 231: Pain Management Case A

Step 8b

Once the morphine syringe chamber is closed, the pump needs to be programmed. The front console has programming buttons.

Fig. 1 shows Alaris pump console used for inputting the pump settings (program) and displaying pump usage data. (Click to Enlarge)




Fig. 1

Question:

What program settings need to be entered (select three)?

- Infusion rate
- Max 1h dose
- Demand ratio
- Syringe size
- Bolus dose
- Delivery ratio
- Max 4h dose
- Lockout time

Submit

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Anaesthesia FACS Cases Anaesthesia FACS Cases - 2... x

Storyline VPs

- ◎ An illness takes place over days / months / years
 - Condenses important clinical events into a story
 - Viewed independent of time
 - Provide an overview of the case from beginning to end
- ◎ 2005-2008 Teaching Development Grant

Example of Storyline VP Web-Page:

Section Three B: Starting The Operation



Shirley is anaesthetized



Shirley is now wheeled down the long corridor to theatre five. She is escorted by one of the nurses from theatre five. The trolley is wheeled through the main door of theatre and parked besides the operating table (Pic 1). Another check to confirm her identity and nature of her operation is performed. Her name is checked against the identification bracelet on her wrist, including Hong Kong ID number (Pic 2). The side of the trolley is lowered and she is told to shuffle across onto the black hard flat surface of the operating table. She lies on a white draw sheet, with her head supported by a narrow pillow. She stares up at the ceiling and operating lights (Pic 3). They are switched off. The trolley is wheeled away.



- ⦿ Lack of research as this field is relatively new
- ⦿ Available researches are mainly on how it was implemented
 - Not a lot of information on the students' opinion
- ⦿ What are the students' opinion toward this new type of learning?

What we did

- ◉ From July 2009 to April 2010, we gave 134 med5 students 9 FACS and a storyline VP during their 2 weeks module
- ◉ After the module, an E-survey was sent out
 - **21 agreement items**
- ◉ Students' access record to the E-Learning site was also used

Survey

- ⦿ Time spent?
- ⦿ Location?
- ⦿ How do they view the exercise?
- ⦿ Enjoyable?
- ⦿ Compare between the 2 type of VP?
- ⦿ Has the exercises improved their skills?

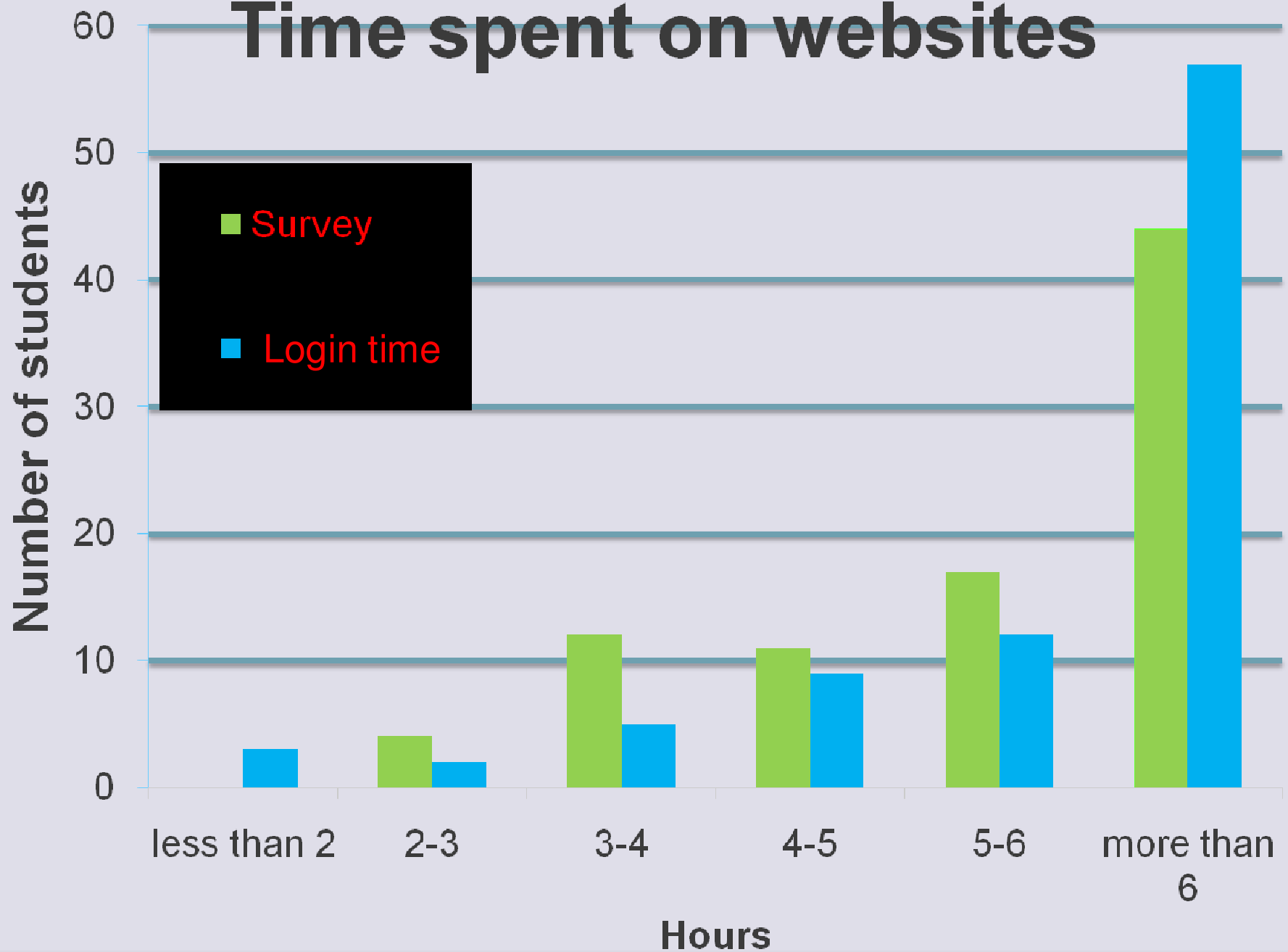
Result

- 70% (n=94) replied the survey

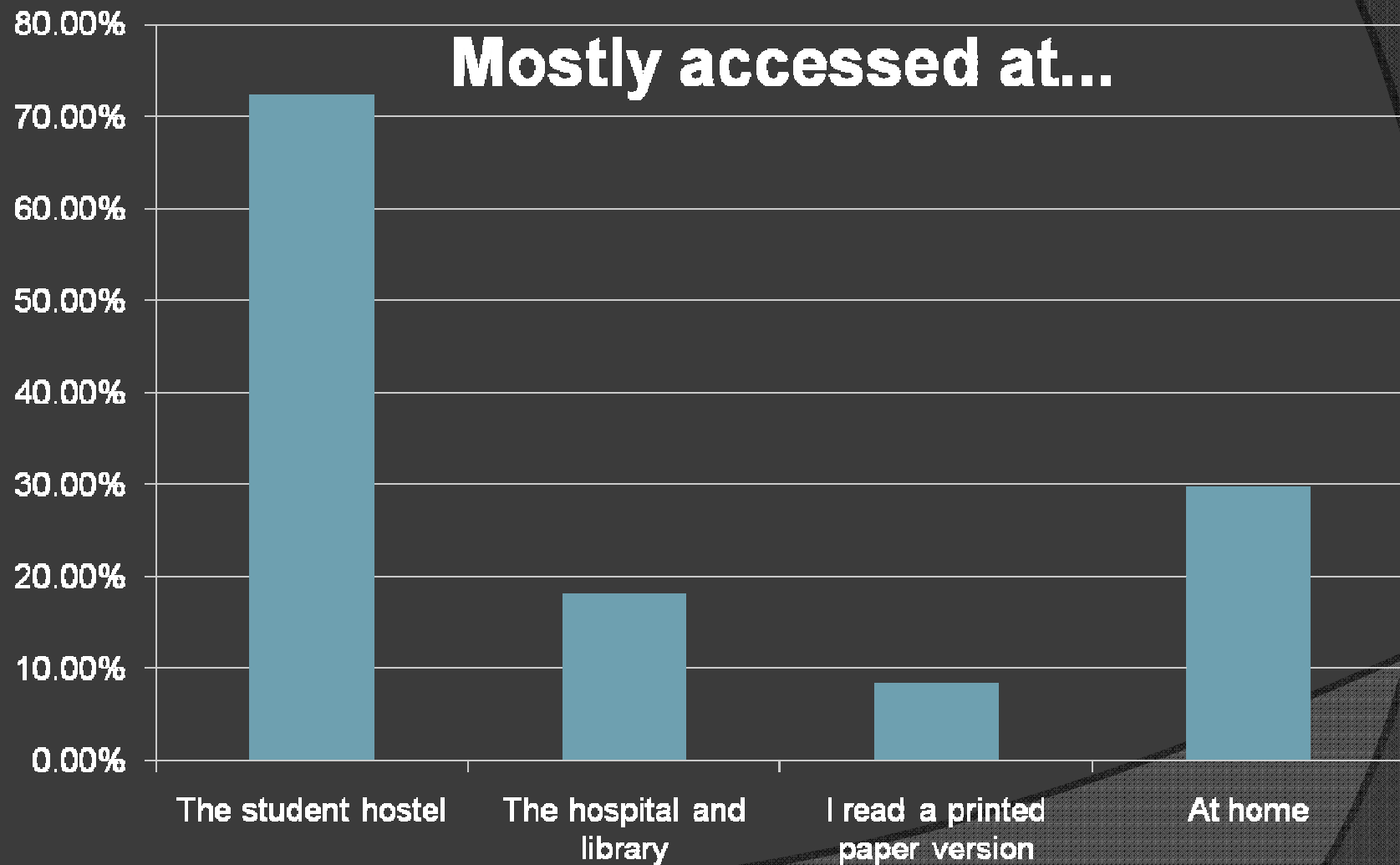
From log in time in database:

- 100% of students had used FACS
 - Median: 5 hours [3.5 – 7.5 hours]
- 86% (n=113) used VP
 - Median: 3 hours [1-4.25 hours]

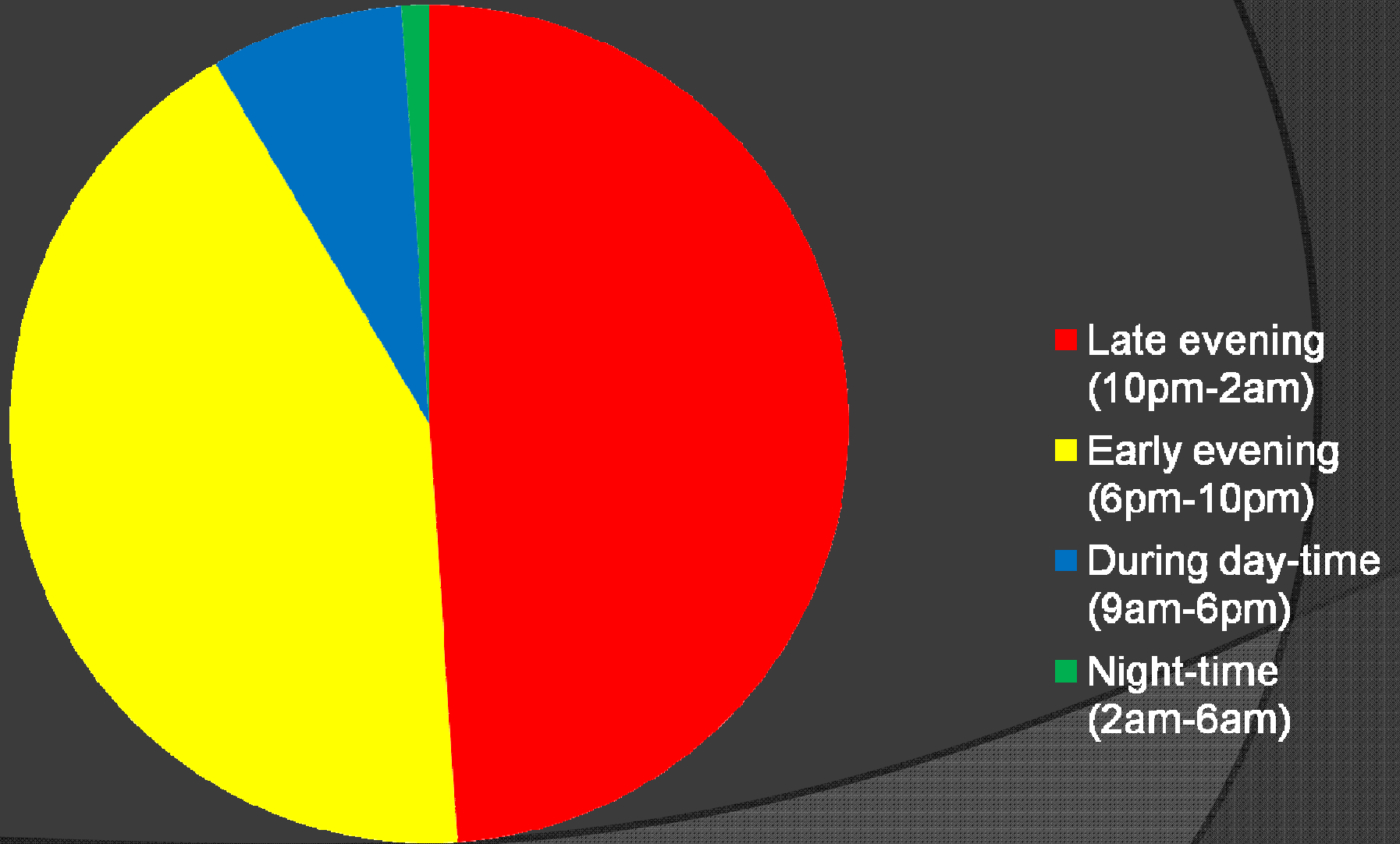
Time spent on websites



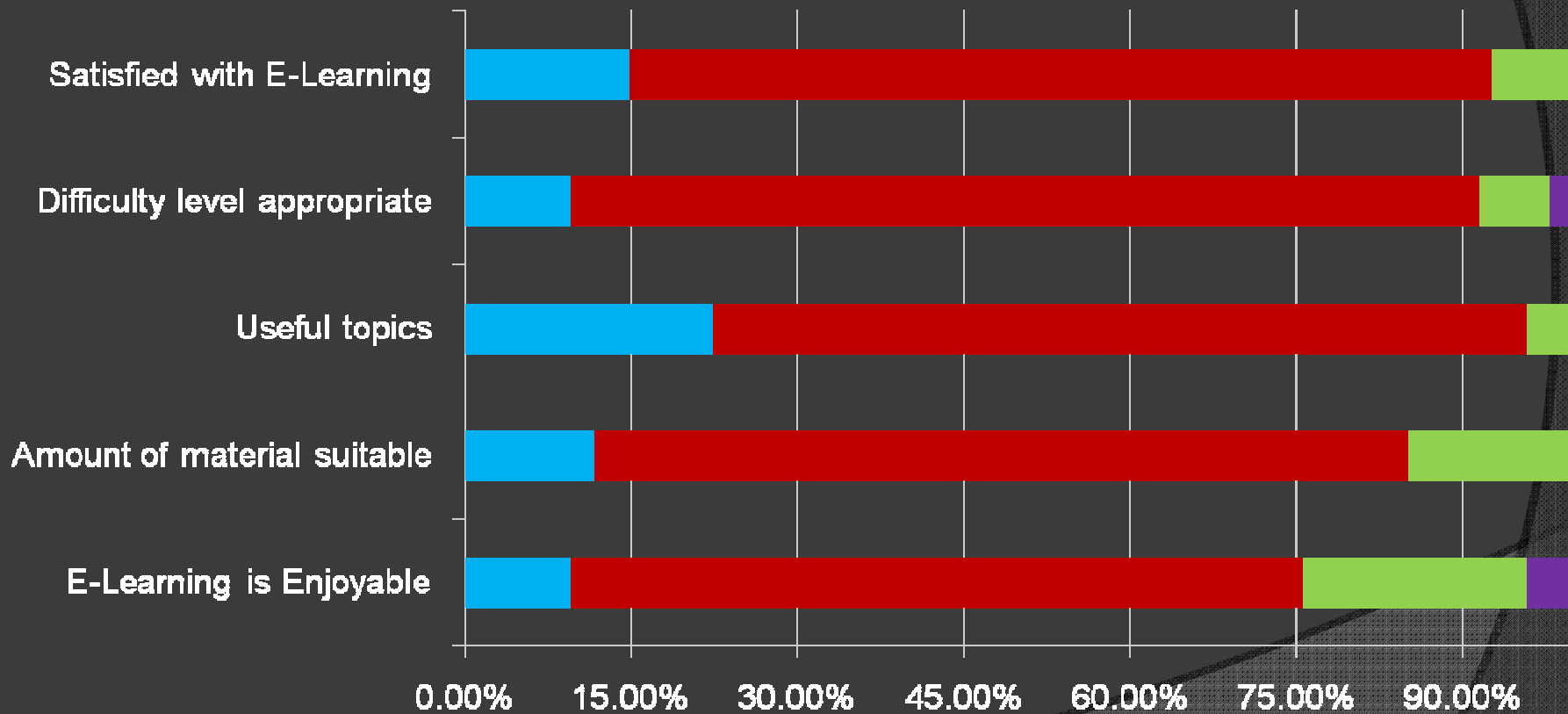
Where and how have they been using the exercises?



When do they use it?

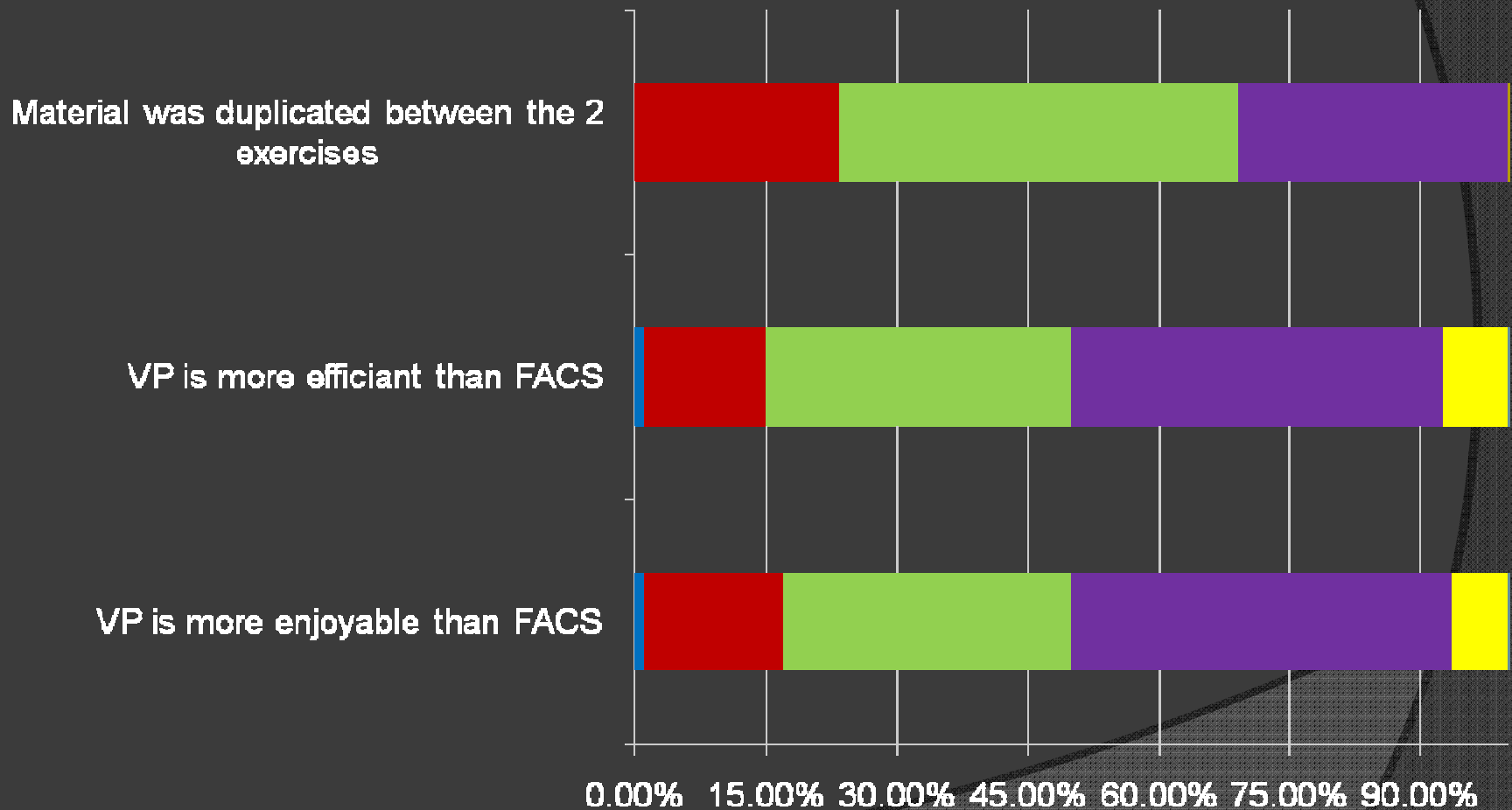


Do they enjoy them?



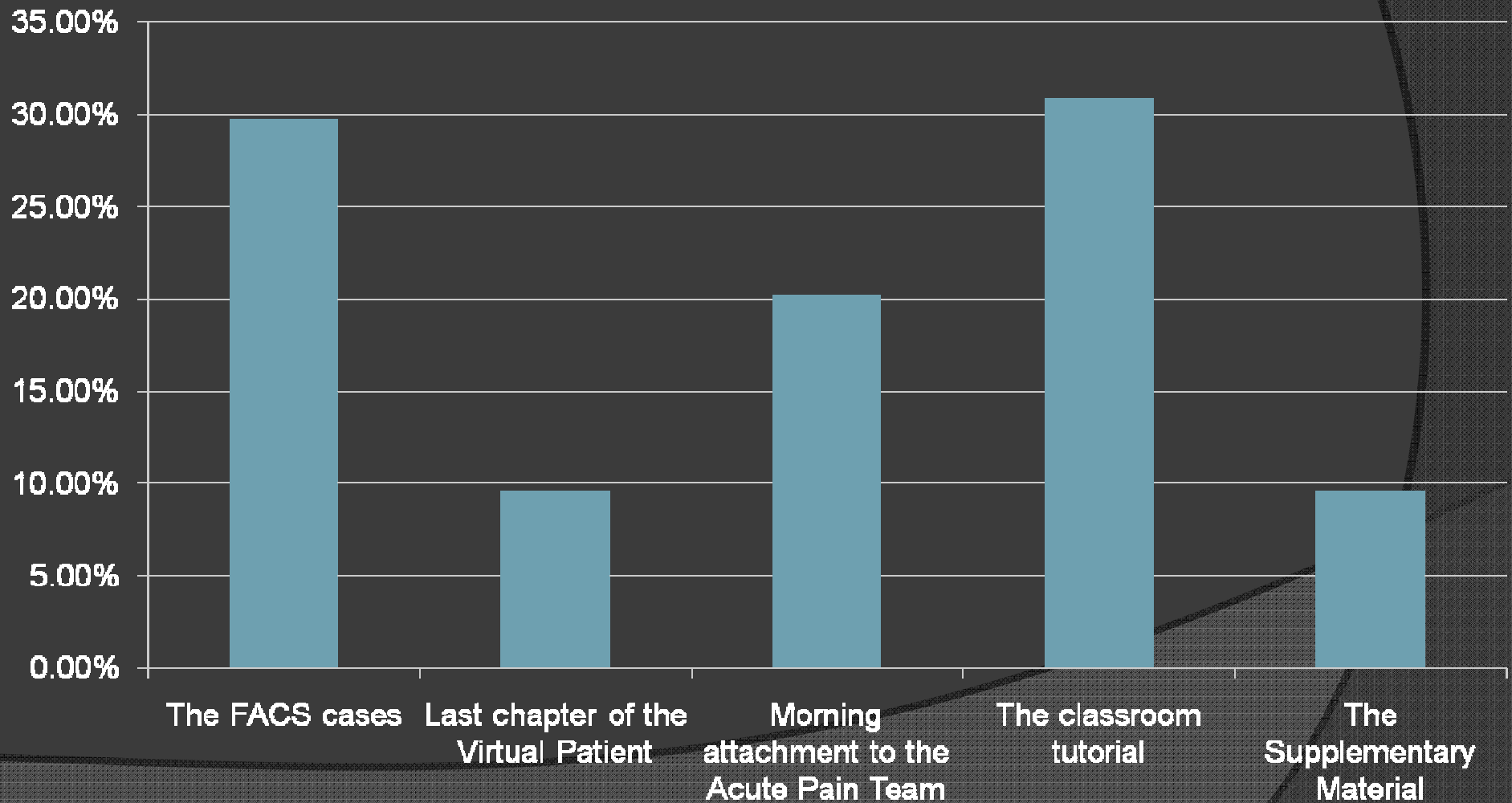
Compare between the 2 type of VP

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

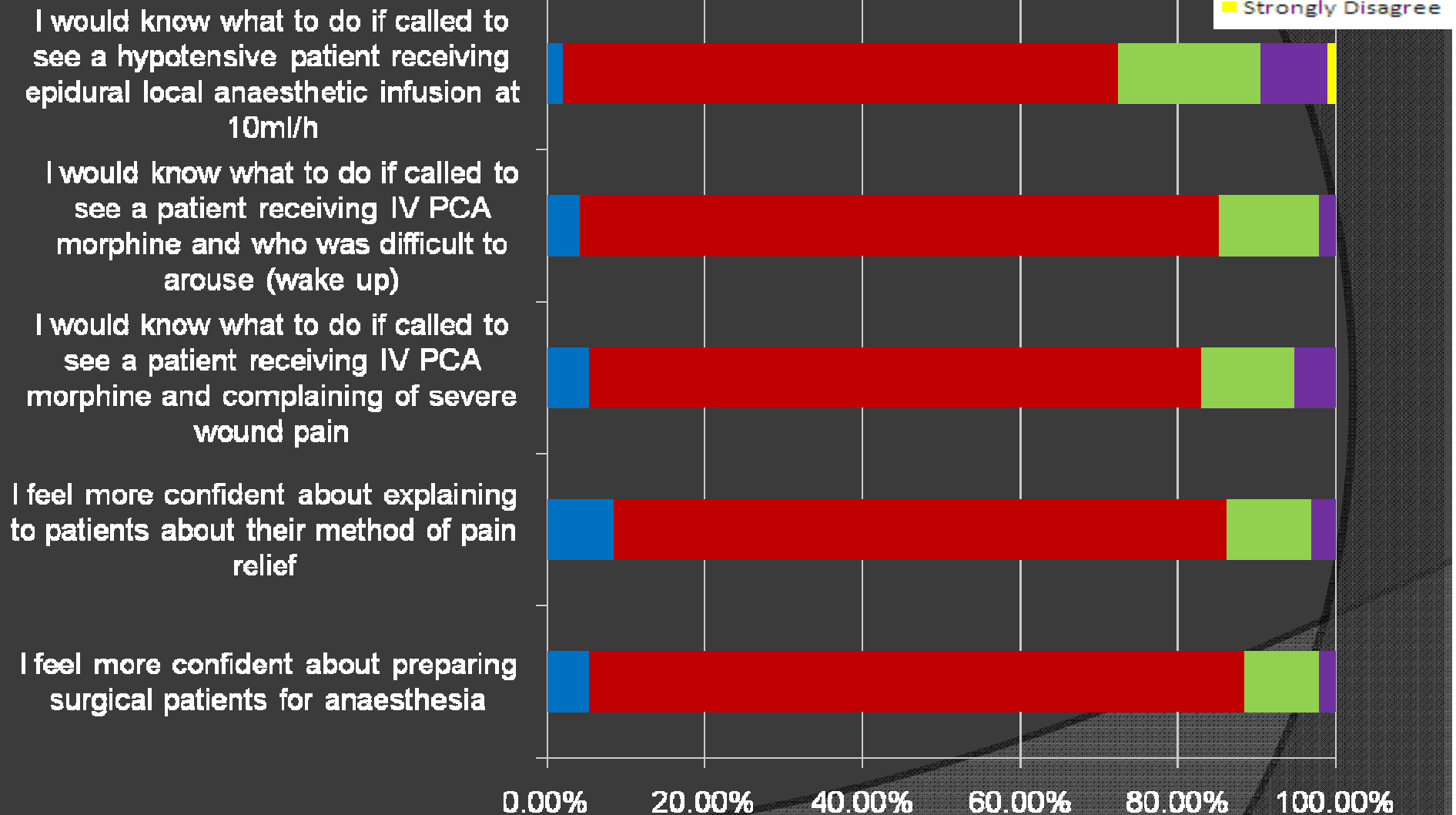


Compare between the 2 type of VP-CON'T

Method preferred for this subject



Has the exercises improved their skills?



Conclusion

- ① The students enjoyed the addition of the E-Learning material
- ① FACS is more preferable than the storyline VP
- ① The exercises improved their confidence for their future work

THANK YOU!

Questions?