

# STUDENT' S PERCEPTION TOWARDS BLENDED LEARNING IN APPLIED EXERCISE REHABILITATION COURSE BETWEEN FACULTY OF SPORTS SCIENCE STUDENTS IN UNIVERSITI TEKNOLOGI MARA (UiTM) SHAH ALAM AND SEREMBAN 3 CAMPUS

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## STUDENTS' PERCEPTION TOWARDS BLENDED LEARNING IN APPLIED EXERCISE REHABILITATION COURSE BETWEEN FACULTY OF SPORTS SCIENCE STUDENTS IN UNIVERSITI TEKNOLOGI MARA (UiTM) SHAH ALAM AND SEREMBAN 3 CAMPUS

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**Abstract:** *This study investigates the perceptions of sports science students towards the blended learning (BL) model in the Applied Exercise Rehabilitation course between UiTM Shah Alam and Seremban 3 campuses. A total of 124 students participated. Data were collected using a modified version of the Bączek (2020) questionnaire and analyzed using SPSS. Results indicate advantages of e-learning (EL) offer accessible lesson like digital materials and flexibility learning from home. However, there were concerns that EL classroom lead several limitations such as technical skill lesson and low learning interaction among students in both campuses. Significant differences were observed between campuses in terms of perceived effectiveness in gaining knowledge and classroom engagement. Findings underscore the need for improved BL strategies in exercise rehabilitation subject.*

**Keywords:** *Blended Learning; Perception; Applied Exercise Rehabilitation; Sports Science Education; Higher Education.*

### 1. INTRODUCTION

In 2019, the COVID-19 outbreak, affect world and Malaysia. After Malaysia slowly recovered from deadly outbreak [1], Malaysia government has announced the importance adoption of blended learning (BL) education from traditional physical learning classroom[2]. BL involves the combination of both e-learning (EL) and traditional physical learning. After post-COVID-19 outbreak, transition involves integrating EL to BL classroom especially in all higher learning institutions in Malaysia.

To meet the demand of post COVID-19 restrictions, several sports science related degree programmed had rapidly adapted to this teaching delivery approach from traditional learning to EL and BL education platforms. The shift to EL during the COVID-19 pandemic brought about a real challenge for both lecturers and students [3]. For example, on how to provide an efficient communication system during online class are essential and conveying information to students, faculty and staff [4]. In sports science program subjects such as applied exercise rehabilitation is required face-to-face andragogy to equip the student knowledge problem solving and clinical reasoning tasks. Moreover, face-to-face learning classes have significant impact towards health of the students [5].

It is known that barriers facing by the student on EL as discussed many in the literature. This is also commonly faced by physiotherapy and other medical courses. The problems facing the medical and health courses are

reduced access to educator time which is critical for the students to understand the knowledge, lack of task instruction time, no access to correct facilities and independent driven learner and lack of proper peers' communication. Moreover, recent research suggests all the online handouts and acquisition coursework on certain technique-orientation skills have failed to transition to EL approaches[6].

Numerous research has been done uncovering and exploring the usage of BL and how students perceive the method of teaching and learning being used. But there is not much study specifically about the students' perceptions towards the BL being implemented in 'Applied Exercise Rehabilitation' course specifically. Other than that, the method used varies from one study to another with differing results and conclusions. Nevertheless, the effectiveness of this learning approach has not been completely quantitatively synthesized and evaluated using knowledge outcomes in health education[7]. There must be collaboration between educators and learners to attain the objectives in a particular class.

Educators shall aim for better academic performance of students[8]. This study is to be carried out to distinguish between students' perceptions of the course when being taught using online learning models and a combination of both online learning and offline face-to-face learning method with not every student's perception being the same. There are limited studies in literature that specifically focus on the 'one-way communication' aspect when the online learning model is being used in teaching and learning and the different level of attaining

knowledge when different methods are being used within the same subject (BL Model).

The main purpose of this research is to explore the students' perceptions towards BL of Applied Exercise Rehabilitation course among students in Faculty of Sport Science and Recreation UiTM Shah Alam and UiTM Seremban campus.

## 2. METHODS

### *Participants*

A total of 124 students (87 from UiTM Shah Alam and 37 from UiTM Seremban 3) participated. The inclusion criteria of the participants were Bachelor of Sports Science (SR243) students and enrolled in applied exercise rehabilitation course. Ethical approval was obtained ( ) and informed consent was provided.

### *Research design*

This study uses a quantitative a comparative study design to examine student perception towards blended learning class for subject applied exercise rehabilitation in FSR UiTM Shah Alam campus and FSR Seremban campus.

### *Questionnaire*

This study the study used a questionnaire survey which adopted from [9]. The questionnaire n consists of four parts which are demographic, the perception between advantages and disadvantages of EL, comparison between EL and BL, acceptance of BL on exercise rehabilitation subject among students FSR in UiTM Shah Alam and FSR Seremban campus.

### *Data analysis*

The data will be analysed using the Statistical Package for Social Sciences (SPSS) 27.0 software. Descriptive and inferential statistics of the demographic data such as age, gender, ethnicity, and experience with online learning will be reported. For frequency distribution and percentages were reported mean and standard deviations (mean SD) will be shown. The significant difference between respondents were estimated using Chi-Square analysis. The significant differences were set  $p < .05$ .

## 3. RESULTS

Table 1 presents the descriptive profiles of the respondents between UiTM Shah Alam and UiTM Seremban

**Table 1: Demographic characteristics of respondent**

|                                           |                 | UiTM<br>SHAH<br>ALAM<br>(N = 87) | UiTM<br>SEREM<br>BAN<br>(N = 37) | SIG.          |
|-------------------------------------------|-----------------|----------------------------------|----------------------------------|---------------|
| <b>GENDER</b>                             | <i>MALE</i>     | 53                               | 21                               | $p = 0.665$   |
|                                           | <i>FEMALE</i>   | 34                               | 16                               |               |
| <b>AGE</b>                                | <i>18 – 22</i>  | 22                               | 8                                | $p = 0.043^*$ |
|                                           | <i>23 – 25</i>  | 62                               | 23                               |               |
|                                           | <i>26 – 28</i>  | 3                                | 6                                |               |
|                                           |                 |                                  |                                  |               |
| <b>ETHNICITY</b>                          | <i>MALAY</i>    | 75                               | 35                               | $p = 0.306$   |
|                                           | <i>BUMIPUT</i>  | 8                                | 2                                |               |
|                                           | <i>ERA</i>      |                                  |                                  |               |
|                                           | <i>SABAH</i>    |                                  |                                  |               |
|                                           | <i>BUMIPUT</i>  | 4                                | 0                                |               |
| <b>EDUCATIO<br/>N<br/>BACKGROU<br/>ND</b> | <i>ERA</i>      |                                  |                                  | $p = 0.664$   |
|                                           | <i>SARAWAK</i>  |                                  |                                  |               |
|                                           | <i>STPM</i>     | 47                               | 17                               |               |
|                                           |                 |                                  |                                  |               |
| <b>ATHLETE<br/>STUDENT</b>                | <i>MATRICUL</i> | 20                               | 9                                | $p = 0.364$   |
|                                           | <i>ATION</i>    |                                  |                                  |               |
|                                           | <i>DIPLOMA</i>  | 20                               | 11                               |               |
| <b>REPEATERS</b>                          | <i>YES</i>      | 44                               | 22                               | $p = 0.076$   |
|                                           | <i>NO</i>       | 43                               | 15                               |               |
|                                           |                 |                                  |                                  |               |
|                                           | <i>YES</i>      | 7                                | 0                                | $p = 0.076$   |
|                                           | <i>NO</i>       | 80                               | 37                               |               |

*n* = number, *SIG* = significant, *STPM* = Malaysian Higher School Certificate, *Bumiputera Sabah* = Sabah Indigenous

### **Differences of perception on the advantages of e-learning among FSR students in UiTM Shah Alam**

From Table 2, it was reported that “Access to online materials, Ability to stay at home, class interactivity, Ability to record a meeting” and “Access to online materials, learning at your own pace, Ability to stay at home, Ability to record a meeting” are the highest scoring responses ( $n=10$ ;  $\%= 11.5$ ), respectively. While the responses of “Access to online materials, Learning on your own pace, Ability to stay at home” and “Access to online materials, Learning on your own pace, Class interactivity, Ability to record a meeting” were the second highest responses ( $n=7$ ;  $\%=8.0$ ) for the advantages of e-learning among FSR students in UiTM Shah Alam,

**Table 2: Responses on the advantages of e-learning amongst FSR students at UiTM Shah Alam**

|                                                                                                                                                                    | UITM SHAH ALAM<br>(N = 87) |      | SIG.             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------|------------------|
|                                                                                                                                                                    | f                          | %    |                  |
| <i>Access to online materials, Ability to stay at home, Classes interactivity, Ability to record a meeting</i>                                                     | 10                         | 11.5 | <b>p = 0.018</b> |
| <i>Access to online materials, Learning on your own pace, Ability to stay at home, Ability to record a meeting,</i>                                                | 10                         | 11.5 |                  |
| <i>Access to online materials, Learning on your own pace, Ability to stay at home</i>                                                                              | 7                          | 8.0  |                  |
| <i>Access to online materials, Learning on your own pace, Classes interactivity, Ability to record a meeting</i>                                                   | 7                          | 8.0  |                  |
| <i>Access to online materials, Ability to stay at home, Ability to record a meeting</i>                                                                            | 6                          | 6.9  |                  |
| <i>Access to online materials, Learning on your own pace, Ability to stay at home, Classes interactivity</i>                                                       | 6                          | 6.9  |                  |
| <i>Access to online materials, Learning on your own pace, Ability to stay at home, Classes interactivity, Ability to record a meeting, Comfortable surrounding</i> | 4                          | 4.6  |                  |
| <i>Learning on your own pace, Ability to stay at home, Classes interactivity, Ability to record a meeting</i>                                                      | 3                          | 3.4  |                  |
| <i>Access to online materials, Learning on your own pace, Ability to record a meeting</i>                                                                          | 3                          | 3.4  |                  |
| <i>Ability to stay at home</i>                                                                                                                                     | 2                          | 2.3  |                  |
| <i>Learning on your own pace, Ability to stay at home, Ability to record a meeting</i>                                                                             | 2                          | 2.3  |                  |
| <i>Access to online materials, Ability to stay at home, Ability to record a meeting, Comfortable surrounding</i>                                                   | 2                          | 2.3  |                  |
| <i>Access to online materials, Learning on your own pace, Ability to stay at home, Ability to record a meeting, Comfortable surrounding</i>                        | 2                          | 2.3  |                  |
| <i>Access to online materials, Learning on your own pace</i>                                                                                                       | 1                          | 1.1  |                  |

*n* = number, *f* = Frequency, % = percentage, *SIG* = significant

#### Differences of perception on the advantages of e-learning among FSR students in UiTM Seremban.

From Table 3, it was reported that “*Access to online materials, Ability to stay at home, Ability to record a meeting*” were the highest scoring responses (*n*=4; %=10.8). While the responses of “*Access to online materials, Learning on your own pace, Ability to stay at home*”, “*Access to online materials, Learning on your own pace, Ability to stay at home, Ability to record a meeting*”, “*Ability to record a meeting, Comfortable surrounding*” and “*Ability to stay at home, Classes interactivity*” were the second highest responses obtained (*n*=3; %=8.1) for the advantages of e-learning among FSR students in UiTM Seremban.

**Table 3: Responses on the advantages of e-learning amongst FSR students in UiTM Seremban.**

|                                                                                                                     | UITM SEREMBAN<br>(N = 37) |      | SIG.             |
|---------------------------------------------------------------------------------------------------------------------|---------------------------|------|------------------|
|                                                                                                                     | f                         | %    |                  |
| <i>Access to online materials, Ability to stay at home, Ability to record a meeting</i>                             | 4                         | 10.8 | <b>p = 0.018</b> |
| <i>Access to online materials, Learning on your own pace, Ability to stay at home</i>                               | 3                         | 8.1  |                  |
| <i>Access to online materials, Learning on your own pace, Ability to stay at home, Ability to record a meeting,</i> | 3                         | 8.1  |                  |
| <i>Ability to record a meeting, Comfortable surrounding</i>                                                         | 3                         | 8.1  |                  |
| <i>Ability to stay at home, Classes interactivity</i>                                                               | 3                         | 8.1  |                  |
| <i>Learning on your own pace, Ability to stay at home</i>                                                           | 2                         | 5.4  |                  |
| <i>Classes interactivity, Ability to record a meeting, Comfortable surrounding</i>                                  | 2                         | 5.4  |                  |
| <i>Ability to stay at home, Classes interactivity, Ability to record a meeting</i>                                  | 2                         | 5.4  |                  |
| <i>Access to online materials, Ability to record a meeting</i>                                                      | 2                         | 5.4  |                  |
| <i>Access to online materials, Ability to stay at home</i>                                                          | 2                         | 5.4  |                  |
| <i>Learning on your own pace, Ability to record a meeting</i>                                                       | 1                         | 2.7  |                  |
| <i>Learning on your own pace, Classes interactivity</i>                                                             | 1                         | 2.7  |                  |
| <i>Ability to stay at home, Classes interactivity, Comfortable surrounding</i>                                      | 1                         | 2.7  |                  |
| <i>Access to online materials, Ability to stay at home, Comfortable surrounding</i>                                 | 1                         | 2.7  |                  |
| <i>Learning on your own pace, Ability to stay at home, Ability to record a meeting</i>                              | 1                         | 2.7  |                  |
| <i>Learning on your own pace, Classes interactivity, Comfortable surrounding</i>                                    | 1                         | 2.7  |                  |
| <i>Ability to stay at home, Classes interactivity, Ability to record a meeting, Comfortable surrounding</i>         | 1                         | 2.7  |                  |
| <i>Access to online materials, Ability to stay at home, Ability to record a meeting, Comfortable surrounding</i>    | 1                         | 2.7  |                  |

*n* = number, *f* = Frequency, % = percentage, *SIG* = significant

#### Differences of perception on the disadvantages of e-learning among FSR students in UiTM Shah Alam.

In table 4, it was reported that “*Lack of face-to-face interactions, Technical difficulties (limited access to resources and support e.i poor internet connection), Lack of interactions (students/patients)*” obtained the highest number of responses (*n*=9; %=10.3). The “*Lack of face-to-face interactions, Technical difficulties (limited access to resources and support e.i poor internet connection), Unconducive learning environment, Self-distraction (deliberately doing other things during the same time)*”, was the second highest scoring response (*n*=8, %=9.2%) for the disadvantages of e-learning among FSR students in UiTM Shah Alam.

**Table 4: Responses on the disadvantages of e-learning amongst FSR students in UiTM Shah Alam.**

|                                                                                                                                                                                                                                                            | UITM SHAH ALAM<br>(N = 87) |      | SIG.             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------|------------------|
|                                                                                                                                                                                                                                                            | f                          | %    |                  |
| <i>Lack of face-to-face interactions, Technical difficulties (limited access to resources and support e.i poor internet connection), Lack of interactions (students/patients)</i>                                                                          | 9                          | 10.3 | <b>p = 0.008</b> |
| <i>Lack of face-to-face interactions, Technical difficulties (limited access to resources and support e.i poor internet connection), Unconducive learning environment, Self-distraction (deliberately doing other things during the same time)</i>         | 8                          | 9.2  |                  |
| <i>Lack of face-to-face interactions, Lack of interactions (students/patients), Unconducive learning environment, Social isolation</i>                                                                                                                     | 6                          | 6.9  |                  |
| <i>Lack of face-to-face interactions, Technical difficulties (limited access to resources and support e.i poor internet connection), Lack of interactions (students/patients), Self-distraction (deliberately doing other things during the same time)</i> | 5                          | 5.7  |                  |
| <i>Lack of face-to-face interactions, Technical difficulties (limited access to resources and support e.i poor internet connection), Self-distraction (deliberately doing other things during the same time)</i>                                           | 4                          | 4.6  |                  |
| <i>Unconducive learning environment, Self-distraction (deliberately doing other things during the same time), Social isolation</i>                                                                                                                         | 4                          | 4.6  |                  |
| <i>Lack of face-to-face interactions, Technical difficulties (limited access to resources and support e.i poor internet connection), Lack of interactions (students/patients), Unconducive learning environment</i>                                        | 4                          | 4.6  |                  |
| <i>Technical difficulties (limited access to resources and support e.i poor internet connection), Lack of</i>                                                                                                                                              | 4                          | 4.6  |                  |

n = number, f = Frequency, % = percentage, SIG = significant

#### Differences in perceptions of perception on the disadvantages of e-learning among FSR students in UiTM Seremban.

In table 5, it was reported that “*Lack of face-to-face interactions, Lack of interactions (students/patients), Self-distraction (deliberately doing other things during the same time)*” and “*Lack of face-to-face interactions, Technical difficulties (limited access to resources and support e.i poor internet connection), Lack of interactions (students/patients)*” obtained the highest number of responses (n=4; %=10.8). The “*Technical difficulties (limited access to resources and support e.i poor internet connection), Self-distraction (deliberately doing other things during the same time)*”, was the second highest scoring response (n=3; %=8.1%) for the disadvantages of e-learning among FSR students in UiTM Seremban.

**Table 5: Responses on the disadvantages of e-learning amongst FSR students in UiTM Seremban.**

|                                                                                                                                                                                                 | UITM SEREMBAN<br>(N = 37) |      | SIG.             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------|------------------|
|                                                                                                                                                                                                 | f                         | %    |                  |
| <i>Lack of face-to-face interactions, Lack of interactions (students/patients), Self-distraction (deliberately doing other things during the same time)</i>                                     | 4                         | 10.8 | <b>p = 0.008</b> |
| <i>Lack of face-to-face interactions, Technical difficulties (limited access to resources and support e.i poor internet connection), Lack of interactions (students/patients)</i>               | 4                         | 10.8 |                  |
| <i>Technical difficulties (limited access to resources and support e.i poor internet connection), Self-distraction (deliberately doing other things during the same time)</i>                   | 3                         | 8.1  |                  |
| <i>Lack of interactions (students/patients), Unconducive learning environment</i>                                                                                                               | 2                         | 5.4  |                  |
| <i>Technical difficulties (limited access to resources and support e.i poor internet connection), Self-distraction (deliberately doing other things during the same time), Social isolation</i> | 2                         | 5.4  |                  |
| <i>Technical difficulties (limited access to resources and support e.i poor internet connection), Unconducive learning environment, Social isolation</i>                                        | 2                         | 5.4  |                  |
| <i>Unconducive learning environment, Self-distraction (deliberately doing other things during the same time), Social isolation</i>                                                              | 2                         | 5.4  |                  |
| <i>Lack of face-to-face interactions, Technical difficulties (limited access to resources and support e.i poor internet connection)</i>                                                         | 2                         | 5.4  |                  |
| <i>Technical difficulties (limited access to resources and support e.i poor internet connection), Lack of interactions (students/patients)</i>                                                  | 1                         | 2.7  |                  |
| <i>Technical difficulties (limited access to resources and support e.i poor internet connection), Social isolation</i>                                                                          | 1                         | 2.7  |                  |

n = number, f = Frequency, % = percentage, SIG = significant

#### Comparison of student's activities during face-to-face learning and e-learning between UiTM Shah Alam and UiTM Seremban

Table 6 reported there are significantly differences in “Ineffective” and “Neutral” for the “Rate the effectiveness of e-learning in terms of increasing fundamental knowledge for subject applied exercise rehabilitation”, “Rate the effectiveness of e-learning in terms of increasing clinical skills knowledge for subject applied exercise rehabilitation”, “Rate the effectiveness of e-learning in terms of increasing social competency for subject applied exercise rehabilitation i.e., adaptive behaviour, social skills, peer acceptance” and “Rate your classroom activity during e-learning class for subject applied exercise rehabilitation” between UiTM Shah Alam and UiTM Seremban (p<.05). However, there is no difference in “extremely ineffective”, effective,” and "extremely effective” between respondents in UiTM Shah Alam and UiTM Seremban (p>.05).

Table 6 also reported that there is a significant difference in “effective” and "extremely effective” of “Rate the effectiveness of traditional face-to-face learning in terms of increasing social competency for subject applied exercise rehabilitation)” between UiTM Shah Alam and UiTM Seremban (p<.05). However, there is no difference in “Ineffective” and “Neutral”

between respondents in UiTM Shah Alam and UiTM Seremban ( $p>.05$ ). Also, there are no difference on “Rate the effectiveness of traditional face-to-face learning in terms of increasing fundamental knowledge for subject applied exercise rehabilitation”, “Rate the effectiveness of traditional face-to-face learning in terms of increasing clinical skills knowledge for subject applied exercise rehabilitation” and “Rate your classroom activity during traditional face-to-face class for subject applied exercise rehabilitation”.

Specifically, a higher significant of respondents from UiTM Shah Alam ( $n=44$ ;  $\%=50.6$ ) compared to the respondents from UiTM Seremban ( $n=2$ ;  $\%=5.4$ ) believe that “Rate the effectiveness of e-learning in terms of increasing fundamental knowledge for subject applied exercise rehabilitation” was ineffective ( $p=0.001$ ). Furthermore, significantly higher responses from UiTM Shah Alam ( $n=40$ ;  $\%=46.0$ ) compared to the responses from UiTM Seremban ( $n=8$ ;  $\%=21.6$ ) on “Rate the effectiveness of e-learning in terms of increasing clinical skills knowledge for subject applied exercise rehabilitation” was ineffective ( $p=0.001$ ). Likewise, it is reported that there is a significantly higher number of respondents from UiTM Shah Alam ( $n=43$ ;  $\%=49.4$ ) compared to the respondents from UiTM Seremban ( $n=6$ ;  $\%=16.2$ ) agreed that the “Rate the effectiveness of e-learning in terms of increasing social competency for subject applied exercise rehabilitation i.e., adaptive behaviour, social skills, peer acceptance” was ineffective ( $p=0.001$ ). Moreover, a higher significant number of respondents from UiTM Shah Alam ( $n=58$ ;  $\%=66.7$ ) compared to the respondents from UiTM Seremban ( $n=4$ ;  $\%=10.8$ ) believe that “Rate your classroom activity during e-learning class for subject applied exercise rehabilitation” were ineffective ( $p=0.001$ ). In a different spectrum, there is a significantly higher amount of respondents from UiTM Shah Alam ( $n=55$ ;  $\%=63.2$ ) compared to the amount of respondents from UiTM Seremban ( $n=17$ ;  $\%=45.9$ ) believe that “Rate the effectiveness of traditional face-to-face learning in terms of increasing social competency for subject applied exercise rehabilitation” was effective ( $p=0.040$ ).

**Table 6: Responses on the rate of effectiveness between face-to-face learning and e-learning in terms of ability to master learning objectives amongst FSR students in UiTM Shah Alam and UiTM Seremban.**

|                                                                                                                                   |                       | UiTM SHAH ALAM (N=87) |             | UiTM SEREMBAN (N=37) |             | SIG.        |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------|----------------------|-------------|-------------|
|                                                                                                                                   |                       | f                     | %           | f                    | %           |             |
| Rate the effectiveness of e-learning in terms of increasing fundamental knowledge for subject applied exercise rehabilitation     | Extremely ineffective | 14                    | 16.1        | 0                    | 0.0         | $p = 0.001$ |
|                                                                                                                                   | <b>Ineffective</b>    | <b>44</b>             | <b>50.6</b> | <b>2</b>             | <b>5.4</b>  |             |
|                                                                                                                                   | <b>Neutral</b>        | <b>21</b>             | <b>24.1</b> | <b>7</b>             | <b>18.9</b> |             |
|                                                                                                                                   | Effective             | 6                     | 6.9         | 22                   | 59.5        |             |
| Rate the effectiveness of e-learning in terms of increasing clinical skills knowledge for subject applied exercise rehabilitation | Extremely effective   | 2                     | 2.3         | 6                    | 16.2        | $p = 0.001$ |
|                                                                                                                                   | Extremely ineffective | 20                    | 23.0        | 2                    | 5.4         |             |
|                                                                                                                                   | <b>Ineffective</b>    | <b>40</b>             | <b>46.0</b> | <b>8</b>             | <b>21.6</b> |             |
|                                                                                                                                   | <b>Neutral</b>        | <b>21</b>             | <b>24.1</b> | <b>6</b>             | <b>16.2</b> |             |
|                                                                                                                                   | Effective             | 5                     | 5.7         | 15                   | 40.5        |             |
|                                                                                                                                   | Extremely             | 1                     | 1.1         | 16                   | 16.2        |             |

|                                                                                                                                                                                     |                            |           |             |           |             |             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------|-------------|-----------|-------------|-------------|
|                                                                                                                                                                                     | effective                  |           |             |           |             |             |
| Rate the effectiveness of e-learning in terms of increasing social competency for subject applied exercise rehabilitation i.e., adaptive behaviour, social skills, peer acceptance. | Extremely ineffective      | 14        | 16.1        | 3         | 8.1         | $p = 0.001$ |
|                                                                                                                                                                                     | <b>Ineffective</b>         | <b>43</b> | <b>49.4</b> | <b>6</b>  | <b>16.2</b> |             |
|                                                                                                                                                                                     | <b>Neutral</b>             | <b>20</b> | <b>23.0</b> | <b>10</b> | <b>27.0</b> |             |
|                                                                                                                                                                                     | Effective                  | 9         | 10.3        | 14        | 37.8        |             |
| Rate the effectiveness of traditional face-to-face learning in terms of increasing fundamental knowledge for subject applied exercise rehabilitation                                | Extremely effective        | 1         | 1.1         | 4         | 10.8        | $p = 0.059$ |
|                                                                                                                                                                                     | Ineffective                | 2         | 2.3         | 1         | 2.7         |             |
|                                                                                                                                                                                     | Neutral                    | 10        | 11.5        | 11        | 29.7        |             |
|                                                                                                                                                                                     | Effective                  | 57        | 65.5        | 16        | 43.2        |             |
| Rate the effectiveness of traditional face-to-face learning in terms of increasing clinical skills knowledge for subject applied exercise rehabilitation                            | Extremely effective        | 18        | 20.7        | 9         | 24.3        | $p = 0.422$ |
|                                                                                                                                                                                     | Neutral                    | 13        | 14.9        | 8         | 21.6        |             |
|                                                                                                                                                                                     | Effective                  | 33        | 37.9        | 16        | 43.2        |             |
|                                                                                                                                                                                     | Extremely effective        | 41        | 47.1        | 13        | 35.1        |             |
| Rate the effectiveness of traditional face-to-face learning in terms of increasing social competency for subject applied exercise rehabilitation                                    | Ineffective                | 1         | 1.1         | 2         | 5.4         | $p = 0.040$ |
|                                                                                                                                                                                     | Neutral                    | 6         | 6.9         | 8         | 21.6        |             |
|                                                                                                                                                                                     | <b>Effective</b>           | <b>55</b> | <b>63.2</b> | <b>17</b> | <b>45.9</b> |             |
|                                                                                                                                                                                     | <b>Extremely effective</b> | <b>25</b> | <b>28.7</b> | <b>10</b> | <b>27.0</b> |             |
| Rate your classroom activity during e-learning class for subject applied exercise rehabilitation                                                                                    | Extremely ineffective      | 4         | 4.6         | 0         | 0.0         | $p = 0.001$ |
|                                                                                                                                                                                     | <b>Ineffective</b>         | <b>58</b> | <b>66.7</b> | <b>4</b>  | <b>10.8</b> |             |
|                                                                                                                                                                                     | <b>Neutral</b>             | <b>14</b> | <b>16.1</b> | <b>15</b> | <b>40.5</b> |             |
|                                                                                                                                                                                     | Effective                  | 9         | 10.3        | 13        | 35.1        |             |
| Rate your classroom activity during traditional face-to-face class for subject applied exercise rehabilitation                                                                      | Extremely effective        | 2         | 2.3         | 5         | 13.5        | $p = 0.151$ |
|                                                                                                                                                                                     | Ineffective                | 0         | 0.0         | 1         | 2.7         |             |
|                                                                                                                                                                                     | Neutral                    | 12        | 13.8        | 6         | 16.2        |             |
|                                                                                                                                                                                     | Effective                  | 39        | 44.8        | 21        | 56.8        |             |
|                                                                                                                                                                                     | Extremely effective        | 36        | 41.4        | 9         | 24.3        |             |
|                                                                                                                                                                                     |                            |           |             |           |             |             |

$n$  = number,  $f$  = Frequency,  $\%$  = percentage,  $SIG$  = significant

### Acceptance of blended learning

Table 6 reported there are significant differences in “very unenjoyable” and “somewhat enjoyable” on “Rate how much you enjoy e-learning classes for the subject Applied Exercise Rehabilitation” between UiTM Shah Alam and UiTM Seremban ( $p<.05$ ). However, there are no difference in “extremely unenjoyable”, “very enjoyable” and “extremely enjoyable” between respondents in UiTM Shah Alam and UiTM Seremban ( $p>.05$ ).

Specifically, a higher significant respondent from UiTM Shah Alam ( $n=52$ ;  $\%=59.8$ ) compared to the respondents from UiTM Seremban ( $n=4$ ;  $\%=10.8$ ) believe that “Rate how much you enjoy e-learning classes for the subject Applied Exercise Rehabilitation” was very unenjoyable ( $p=0.001$ ).

**Table 7: Rate of students' acceptance towards BL**

|                                                                                            |                       | UiTM SHAH ALAM (N=87) |             | UiTM SEREMBAN (N=37) |             | SIG.        |
|--------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------------|----------------------|-------------|-------------|
|                                                                                            |                       | f                     | %           | f                    | %           |             |
| Rate how much you enjoy e-learning classes for the subject Applied Exercise Rehabilitation | Extremely unenjoyable | 4                     | 4.6         | 0                    | 0.0         | $p = 0.001$ |
|                                                                                            | Very unenjoyable      | <b>52</b>             | <b>59.8</b> | <b>4</b>             | <b>10.8</b> |             |
|                                                                                            | Somewhat enjoyable    | <b>23</b>             | <b>26.4</b> | <b>8</b>             | <b>21.6</b> |             |
|                                                                                            | Very enjoyable        | 7                     | 8.0         | 19                   | 51.4        |             |
|                                                                                            | Extremely enjoyable   | 1                     | 1.1         | 6                    | 16.2        |             |
| Rate how much did you enjoy traditional face-                                              | Somewhat enjoyable    | 10                    | 11.5        | 6                    | 16.2        | $p = 0.699$ |
|                                                                                            |                       |                       |             |                      |             |             |

|                                                                                |                        |    |      |    |      |
|--------------------------------------------------------------------------------|------------------------|----|------|----|------|
| to-face learning classes<br>for the subject Applied<br>Exercise Rehabilitation | Very<br>enjoyable      | 41 | 47.1 | 18 | 48.6 |
|                                                                                | Extremely<br>enjoyable | 36 | 41.4 | 13 | 35.1 |

*n* = number, *f* = Frequency, % = percentage, *SIG* = significant

#### 4. DISCUSSION

This study is intended to observe the differences in perception of the BL among FSR students from UiTM Shah Alam and UiTM Seremban enrolled in the Applied Exercise Rehabilitation course. Findings revealed that students from both campuses acknowledged key advantages of e-learning, particularly access to materials, the ability to stay at home, and the option to record sessions. However, only Shah Alam students emphasized class interactivity, suggesting that teaching delivery, despite a shared syllabus, may vary between campuses. This aligns with existing literature that underscores the need for effective educator-learner collaboration to meet learning objectives.

Class interactivity emerged as a crucial differentiator in student experience, particularly in Shah Alam, where students reported greater engagement. Interactive strategies—such as group work, quizzes, and discussions—appear to enhance student outcomes, underscoring the importance of pedagogical methods over content alone in shaping perceptions of BL.

In terms of e-learning disadvantages, Shah Alam students highlighted technical difficulties, while Seremban students more frequently cited self-distraction. These challenges reflect contextual differences such as internet accessibility and home learning environments. Limited interaction with lecturers and peers, especially in online settings, further contributed to reduced engagement.

When comparing perceived effectiveness, Shah Alam students rated e-learning as less effective across all learning domains—fundamental knowledge, clinical skills, and social competencies—while Seremban students generally responded more positively. This contrast may be linked to the disadvantages, with Shah Alam respondents particularly affected by connectivity issues and reduced face-to-face engagement.

Overall, both groups preferred traditional face-to-face learning for developing social competencies, suggesting that fully online modalities may still lack critical interpersonal elements necessary in applied health education.

#### 5. CONCLUSIONS

The present dissertation aims to explore the students' perceptions on the advantages, disadvantages, rate of effectiveness, efficacy, and attitude towards BL for the Applied Exercise Rehabilitation course compared between UiTM Shah Alam and UiTM Seremban. Thereafter, the differences in the responses between two different campuses were observed to discover what factors play an important part in students' perceptions and rates of achieving the learning objectives. The novelty of the dissertation findings will allow educators to gain insights and perspectives related to assessment

and future teaching methods and management dealing with blended learning. BL is an effective method of teaching medical students. However, successful integration of online incorporating learning into the curriculum necessitates a well-planned strategy and a more proactive approach.

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