CHAPTER 4

ANALYSIS, PRESENTATION AND DESCRIPTION OF THE RESEARCH FINDINGS

4.1   INTRODUCTION

The researcher conducted quantitative, descriptive research to investigate various aspects related to computer assisted instruction at a particular nursing college. Structured data collection was aimed at determining:

- how computer assisted instruction was applied at the time of data collection
- the benefits of computer assisted instruction and computer-based learning for the learners
- the problems that the learners encountered during computer-based learning.

The methods of data collection and data analysis have been discussed in chapter three (refer to section 3.3). In this chapter, the research findings are discussed. The findings were utilised to formulate recommendations to optimise the utilisation of information communication technologies and associated educational principles in nursing education.

4.2   RESEARCH RESULTS

The results of this research are discussed by referring to the following aspects:

- sample characteristics
- the frequency to which the respondents have been exposed to the different types of computer software (packages)
- the frequency to which the respondents have engaged in the activities associated with computer assisted instruction
- how the respondents benefited from computer assisted instruction
- the problems that the respondents have experienced with computer assisted instruction
- the respondents' preference between computer assisted instruction and traditional teaching strategies.

4.2.1 Sample characteristics

4.2.1.1 <u>Second year respondents</u>

The sample size was 172, and its characteristics are discussed below.

- **<u>Age</u>**

Table 4.1   Age distribution (n=164)

How old are you?

N	Valid	164
	Missing	8
Mean		29.4207
Std. Deviation		7.12809
Minimum		19.00
Maximum		52.00

The second year respondents' ages ranged between 19 and 52 years of age. The mean age was 29 years. The standard deviation was 7, which indicates that the sample was heterogeneous in terms of age. There were eight missing values.
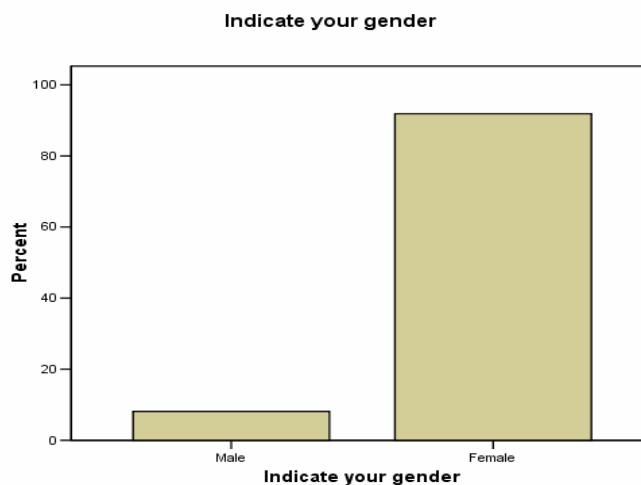
- **<u>Gender</u>**

Figure 4.1   Gender distribution (n=172)

Figure 4.1 indicates that 158 (91.9%) were females, and 14 (8.1%) were males. The mode score was 2.0. The majority (91.9%) of respondents were therefore female.
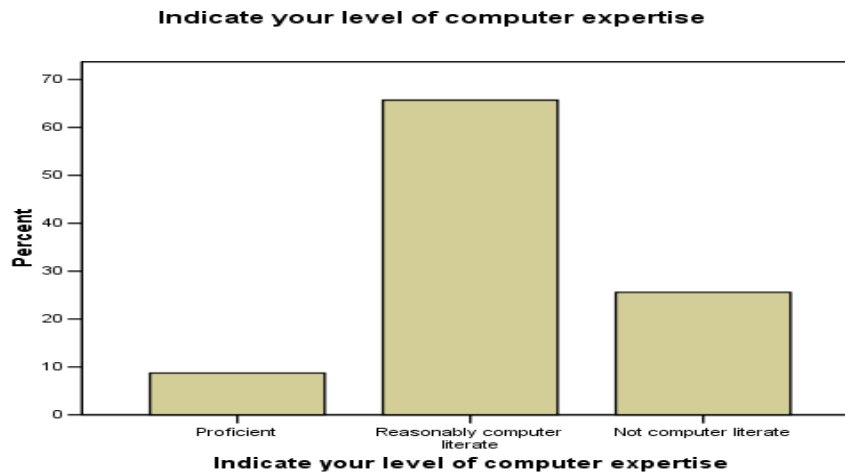
• **Level of computer expertise**

Indicate your level of computer expertise

Figure 4.2   Level of computer expertise (n=172)

Figure 4.2 indicates that 15 (8.7%) respondents were proficient in computer use, 113 (65.7%) were reasonably computer literate, and 44 (25.6%) were not computer literate. The mode score was 2.0. Most respondents (65.7%) were therefore reasonably computer literate, while some were not computer literate.

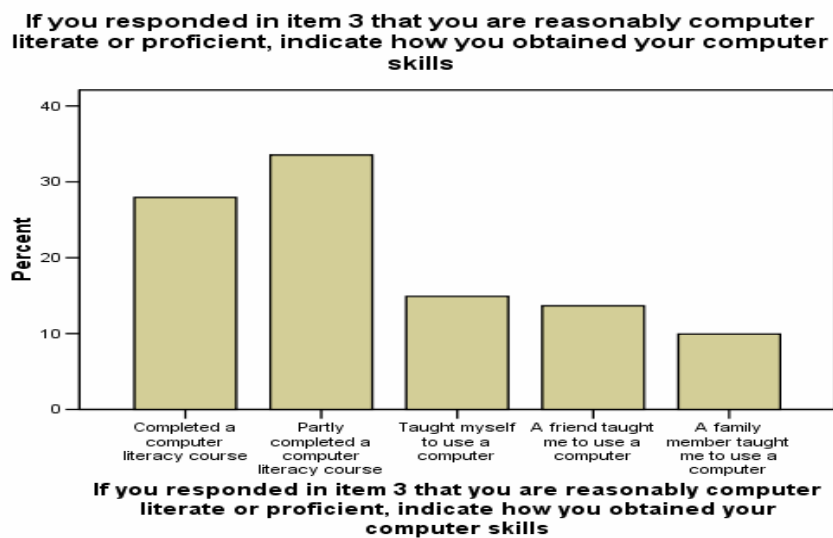• **Main means of obtaining computer skills**

If you responded in item 3 that you are reasonably computer literate or proficient, indicate how you obtained your computer skills

Figure 4.3   Main means of obtaining computer skills (n=161)

Figure 4.3 indicates that 45 (26.2%) respondents completed, and 54 (31.4%) partly completed a computer literacy course while 24 (14.0%) taught themselves, and 22 (12.8%) were taught by a friend, and 16 (9.3%) were taught by a family member. There were 11 (6.4%) missing values. This may be due to a lack of opinion in respondents. Another possible reason is failure, on the part of the researcher, to include an option which reflected their unique circumstances. The mode score was 2.0. Therefore, most respondents (57.6%) either partly completed or completed a computer literacy course.

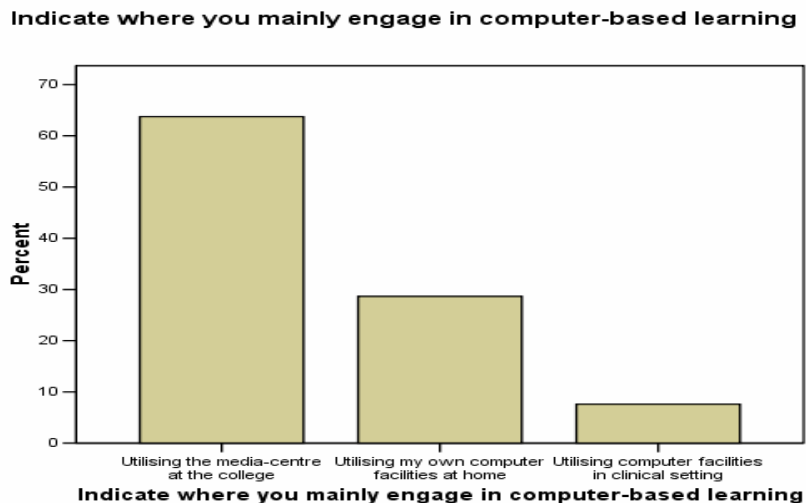- **<u>Where respondents mainly engaged in computer-based learning</u>**

Figure 4.4   Where respondents mainly engaged in computer-based learning (n=171)

Figure 4.4 indicated that 109 (63.4%) respondents utilised the media-centre at the college, 49 (28.5%) utilised their own computers at home, and 13 (7.6%) utilised computer facilities in a clinical setting. There was 1 (0.6%) missing value. The mode score was 1.0. Most respondents (63.4%) therefore utilised the media-centre at the college.

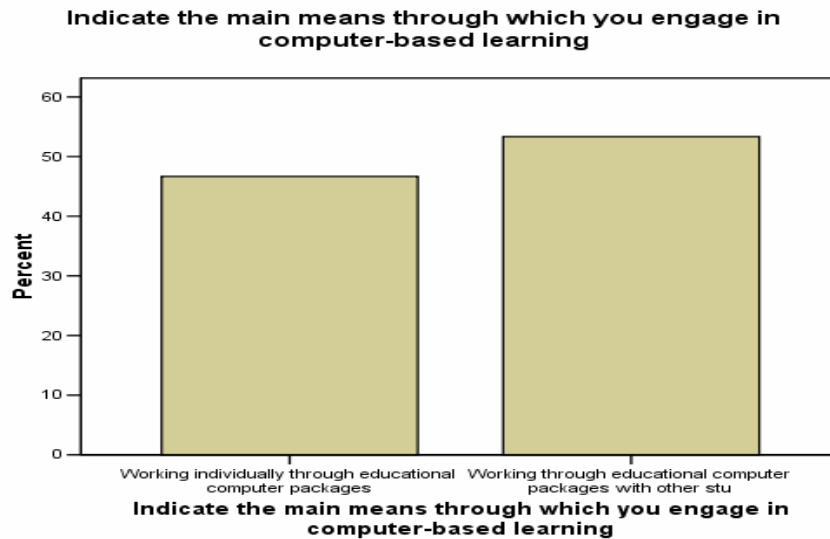- **The main means through which respondents engaged in computer-based learning**

Indicate the main means through which you engage in computer-based learning

Figure 4.5   The main means through which respondents engaged in computer-based learning (n=165)

Figure 4.5 indicates that 77 (44.8%) respondents worked individually through educational computer packages, and 88 (51.2%) worked through educational packages with other learners. There were 7 (4.1%) missing values. The mode score was 2.0. A slight majority of the respondents (51.2%) therefore collaboratively worked through educational packages, while a substantial percentage (44.8%) did so individually.

4.2.1.2 <u>Third year respondents</u>

The sample size was 119, and its characteristics are discussed below.

- **Age**

Table 4.2   Age distribution (n=114)

How old are you?

N	Valid	114
	Missing	5
Mean		28.8421
Std. Deviation		7.19953
Minimum		15.00
Maximum		48.00

The third year respondents' ages ranged between 15 and 48 years. The mean age was 29 years. The standard deviation was 7, which indicates that the sample was heterogeneous in terms of age. One respondent indicated that she/he is 15 years old. The researcher doubted the accuracy of this response, since it is impossible for a third year nursing learner to be this young. There were 5 (4.2%) missing values.
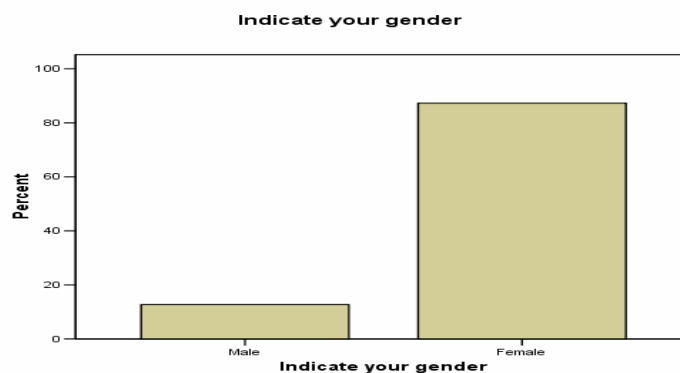
- **Gender**

Figure 4.6   Gender distribution (n=118)

Figure 4.6 indicates that 15 (12.6%) respondents were males and 103 (86.6%) were females. The mode score was 2.0. The majority (86.6%) were therefore female. There was 1 (0.8%) missing value.
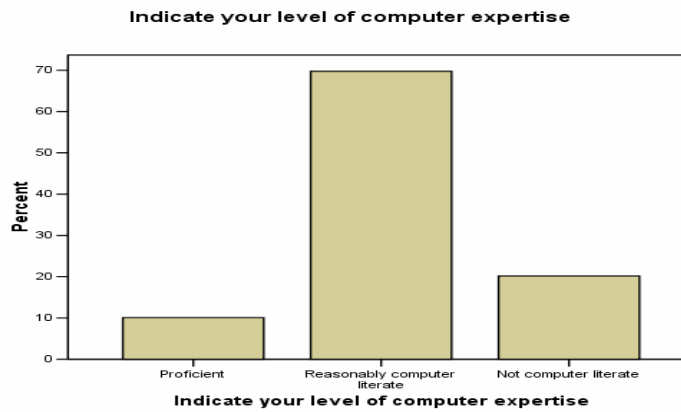
- **Level of computer expertise**

Indicate your level of computer expertise

Figure 4.7   Level of computer expertise (n-119)

Figure 4.7 indicates that 12 (10.1%) respondents were proficient in computer use, 83 (69.7%) were reasonably computer literate, and 24 (20.2%) respondents were not computer literate. The mode score was 2.0. Most respondents (69.7%) were therefore reasonably computer literate.
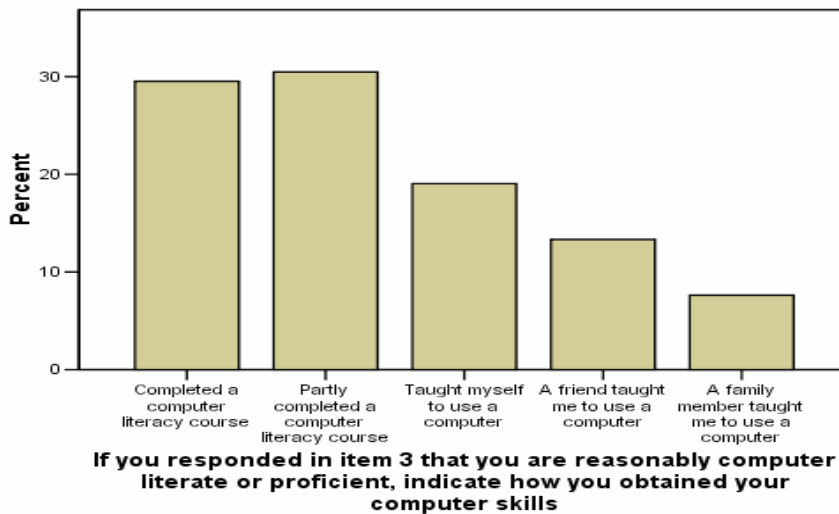
- **Main means of obtaining computer skills**

Figure 4.8   Main means of obtaining computer skills (n=105)

Figure 4.8 indicates that 31 (26.1%) respondents completed a computer literacy course, and 32 (26.9%) respondents partly completed a computer literacy course. Twenty (16.8%) taught themselves, 14 (11.8%) were taught by a friend, and 8 (6.7%) were taught by a family member. There were 14 (11.8%) missing values. This may be due to a lack of opinion in respondents. Another possible reason is failure, on the part of the researcher, to include an option which reflected their unique circumstances. The mode score was 1.0. Most respondents (53.0%) therefore either partly completed or completed a computer literacy course.

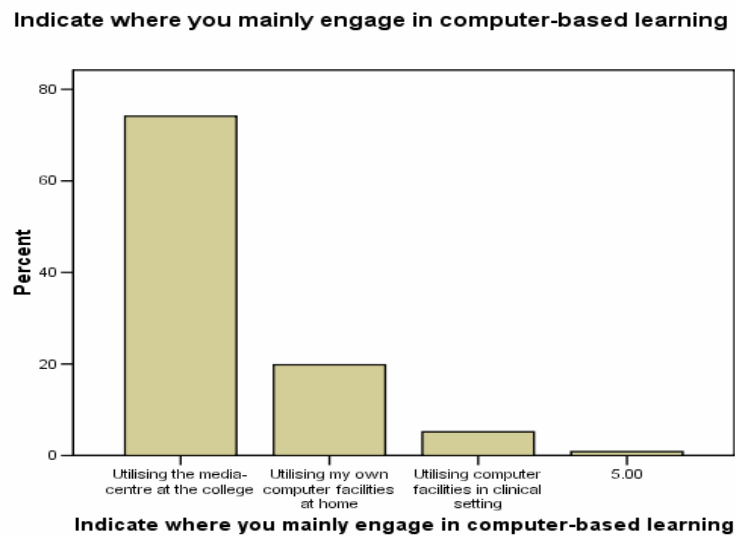- **Where respondents mainly engaged in computer-based learning**

Figure 4.9   Where respondents mainly engaged in computer-based learning (n=116)

Figure 4.9 indicated that 86 (72.3%) respondents utilised the media-centre at the college, 23 (19.3%) utilised their own computers at home, and 6 (5.0%) used computer facilities in clinical setting. There were 3 (2.5%) missing values. The mode score was 1.0. Most respondents (72.3%) therefore utilised the media-centre at the college.

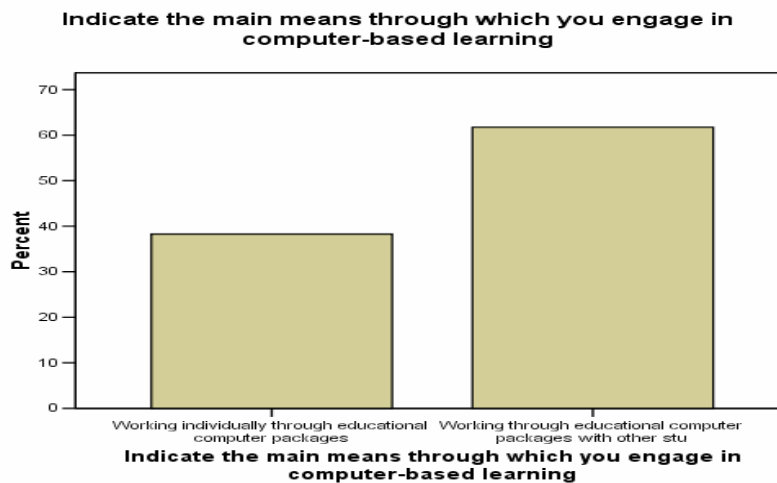- **Main means through which respondents engaged in computer-based learning**.

Indicate the main means through which you engage in computer-based learning

Figure 4.10   Main means through which respondents engaged in computer-based learning (n=115)

Figure 4.10 indicates that 44 (37.0%) respondents worked individually through educational computer packages, and 71 (59.7%) worked through educational packages with other learners. There were 4 (3.4%) missing values. The mode score was 2.0. While most respondents (59.7%) collaboratively worked through educational computer packages, a substantial number, (37.0%), individually worked through educational computer packages.

4.2.2   Exposure to different types of computer software

Section B of the questionnaire comprised 9 items pertaining to the frequency to which the respondents had been exposed to specified computer software which are associated with computer assisted instruction. The researcher discusses the results of both second and third year respondents. The researcher regarded non-exposure of more than 25.0% of the respondents to be problematic.

4.2.2.1 <u>Second year respondents</u>

The research findings pertaining to the second year respondents are presented in the following section. The colour codes for the responses in the pie diagrams are as follows:

Daily;　　　*Weekly;*　　　*Monthly;*　　*Never;*　　　*Missing values.*
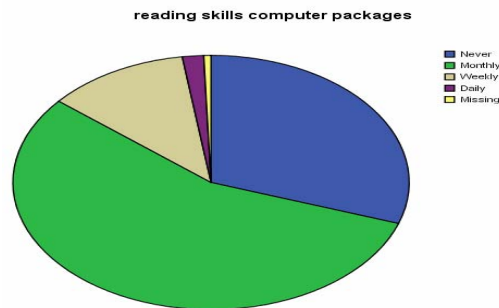
- **<u>Reading skills computer packages</u>**

Figure 4.11　　Reading skills computer packages (n=171)

Figure 4.11 indicates the frequency of respondents' exposure to reading skills computer packages; namely 52 (30.2%) never, 96 (55.8%) monthly, 20 (11.6%) weekly, and 3 (1.7%) daily. There was 1 (0.6%) missing value. The median score was 2.0 (monthly). Most of the respondents (69.1%) had been exposed monthly or more frequently. However, a substantial number (30.2%) had never been exposed. These results indicated under-utilisation of this learning resource.
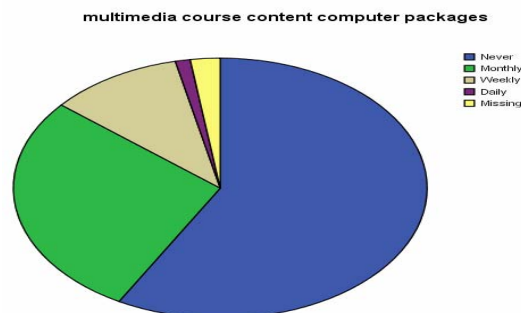
- **<u>Typing skills computer packages</u>**

Figure 4.12　　Typing skills computer packages (n=169)

Figure 4.12 indicates the frequency of respondents' exposure to typing skills computer packages; namely 58 (33.7%) never, 85 (49.4%) monthly, 21 (12.2%) weekly, and 5 (2.9%) daily. There were 3 (1.7%) missing values. The median score was 2.0 (monthly). Most respondents (65.5%) therefore had been exposed on a monthly basis or more frequently. However, a substantial number (33.7%) had never been exposed. These results indicated under-utilisation of this learning resource.
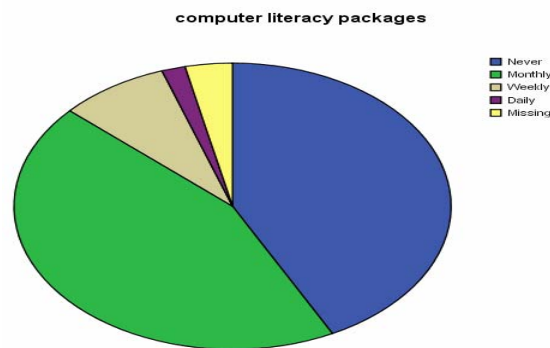
- **Computer literacy packages**

Figure 4.13   Computer literacy packages (n=166)

Figure 4.13 indicates the frequency of respondents' exposure to computer literacy packages; namely 73 (42.4%) never, 76 (44.2%) monthly, 14 (8.1%) weekly, and 3 (1.7%) daily. There were 6 (3.5%) missing values. The median score was 2.0 (monthly). Although most respondents (54.0%) enjoyed monthly or more frequent exposure, it should be noted that a substantial number of respondents (42.4%) had never been exposed. These results indicated under-utilisation of this learning resource.

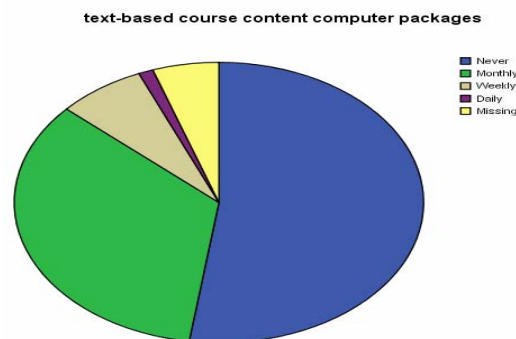- **Text-based course content computer packages**

Figure 4.14   Text-based course content computer packages (n=163)

Figure 4.14 indicates the frequency of respondents' exposure to text-based course content computer packages; namely 90 (52.3%) never, 59 (34.3%) monthly, 12 (7.0%) weekly, and 2 (1.2%) daily. There were 9 (5.2%) missing values. The median score was 1.0 (never). Most respondents (52.3%) have never been exposed, while some (42.5%) had exposure on a monthly or more frequent basis. These results indicated non-utilisation, or at best, under-utilisation of this learning resource.
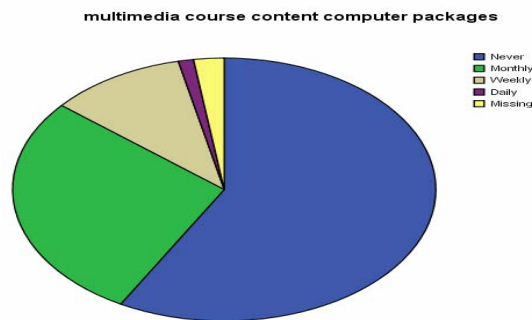
- **Multimedia course content computer packages**

Figure 4.15   Multimedia course content computer packages (n=168)

Figure 4.15 indicates the frequency of respondents' exposure to multimedia course content computer packages; namely 100 (58.1%) never, 48 (27.9%) monthly, 18 (10.5%) weekly, and 2 (1.2 %) daily. There were 4 (2.3%) missing values. The median score was 1.0 (never). Most of the respondents (58.1%) had never been exposed, while some (39.6%) had exposure on a monthly or more frequent basis. These results indicated non-utilisation, or at best, under-utilisation of this learning resource.

- **Text-based computer packages which provide scenarios that develop my problem-solving skills**
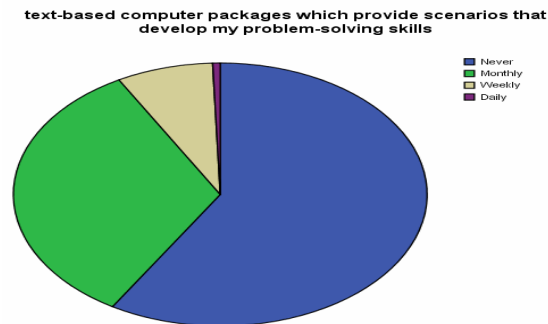

Figure 4.16   Text-based computer packages, which provide scenarios that develop respondents' problem-solving skills (n=172)

Figure 4.16 indicates the frequency of respondents' exposure to text-based computer packages, which provide scenarios that develop their problem-solving skills; namely 101 (58.7%) never, 57 (33.1%) monthly, 13 (7.6%) weekly, and 1 (0.6%) daily. There was 1 (0.6%) missing value. The median score was 1.0 (never). Most of the respondents (58.7%) had never been exposed, while some (41.3%) exposure on a monthly or more frequent basis. These results indicated non-utilisation, or at best, under-utilisation of this learning resource.

- **Multimedia computer packages, which provide scenarios that develop my problem-solving skills**
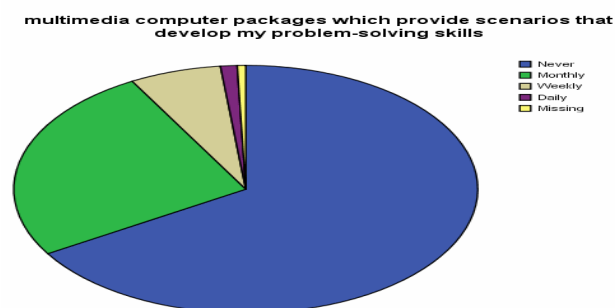

Figure 4.17   Multimedia computer packages, which provide scenarios that develop respondents' problem-solving skills (n=171)

Figure 4.17 indicates the frequency of respondents' exposure to multimedia computer packages, which provide scenarios that develop their problem-solving skills; namely 114 (66.3%) never, 44 (25.6%) monthly, 11 (6.4%) weekly, and 2 (1.2%) daily. There was 1 (0.6%) missing value. The median score was 1.0 (never). Most of the respondents (66.3%) had never been exposed, while some (33.2%) had exposure on a monthly or more frequent basis. These results indicated non-utilisation, or at best, under-utilisation of this learning resource.

- **Computer packages simulating clinical situations which develop my decision-making skills**
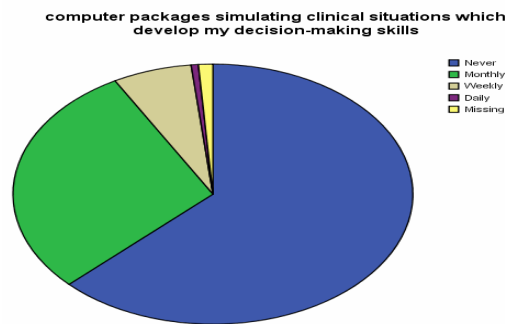

Figure 4.18   Computer packages simulating clinical situations which develop respondents' decision-making skills (n=170)

Figure 4.18 indicates the frequency of respondents' exposure to computer packages simulating clinical situations, which develop their decision-making skills; namely 108 (62.8%) never, 50 (29.1%) monthly, 11 (6.4%) weekly, and 2 (1.2%) daily. There was 1 (0.6%) missing value. The median score was 1.0 (never). Most of the respondents (62.8%) had never been exposed, while some (36.7%) had exposure on a monthly or more frequent basis. These results indicated non-utilisation, or at best, under-utilisation of this learning resource.

Computer packages which enable me to achieve my learning objectives though game-playing

computer packages which enable me to achieve my learning objectives though game-playing
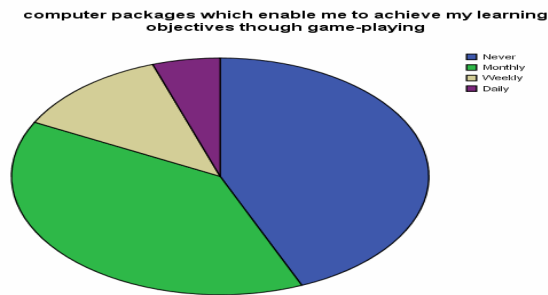
Figure 4.19   Computer packages which enable respondents' to achieve their learning objectives though game-playing (n=172)

Figure 4.19 indicates the frequency of respondents' exposure to computer packages, which enable them to achieve their learning objectives though game-playing; namely 75 (43.6%) never, 67 (39.0%) monthly, 21 (12.2%) weekly, and nine (5.2%) daily. The median score was 2.0 (monthly). A slight majority (56.4%) indicated monthly or more frequent exposure, while a substantial number (43.6%) had never been exposed. These results indicated under-utilisation of this learning resource.

4.2.2.2 Third year respondents

The research findings pertaining to the third year respondents are presented in the following section. The colour codes for the responses in the pie diagrams are as follows:

Daily;   *Weekly;*   *Monthly;*   *Never;*   *Missing values.*

- **Reading skills computer packages**

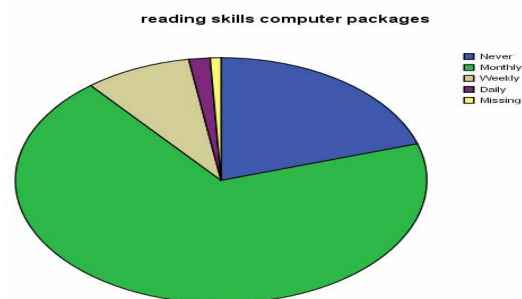reading skills computer packages

Figure 4.20   Reading skills of computer packages (n=118)

Figure 4.20 indicates the frequency of respondents' exposure to reading skills of computer packages; namely 24 (20.2%) never, 82 (68.9%) monthly, 10 (8.4%) weekly, and 2 (1.7%) daily. There was 1 (0.8%) missing value. The median score was 2.0 (monthly). A substantial majority of the respondents (79.0%) had been exposed monthly or more frequently. There is therefore evidence of respondents having access to computer assisted remedial reading assistance.
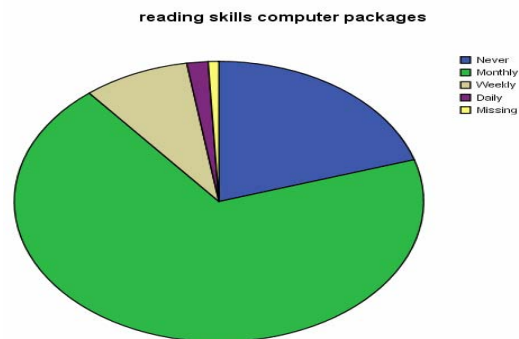
- **Typing skills computer packages**

Figure 4.21   Typing skills computer packages (n=119)

Figure 4.21 indicates the frequency of respondents' exposure to typing skills computer packages; namely 32 (26.9%) never, 72 (60.5%) monthly, 11 (9.2%) weekly, and 4 (3.4%) daily. The median score was 2.0 (monthly). Most of the respondents (73.1%) had been exposed monthly or more frequently. A reasonable number (26.9%) indicated that they had never been exposed. These results indicated under-utilisation of this learning resource.
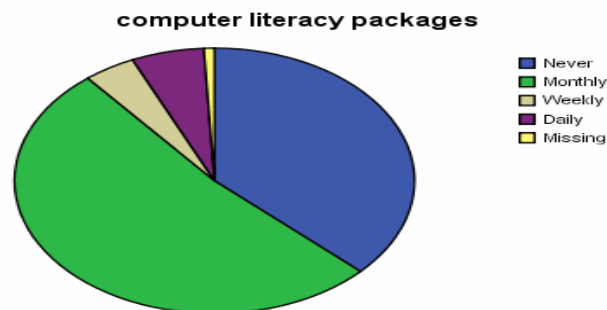
- **Computer literacy packages**

Figure 4.22   Computer literacy packages (n=118)

Figure 4.22 indicates the frequency of respondents' exposure to computer literacy packages; namely 44 (37.0%) never, 62 (52.1%) monthly, 5 (4.2%) weekly, and 7 (5.9%) daily. There was 1 (0.6%) missing value. The median score was 2.0 (monthly). Although most respondents (62.2%) enjoyed monthly or more frequent exposure, a substantial number (37.0%) had never been exposed. These results indicated under-utilisation of this learning resource.
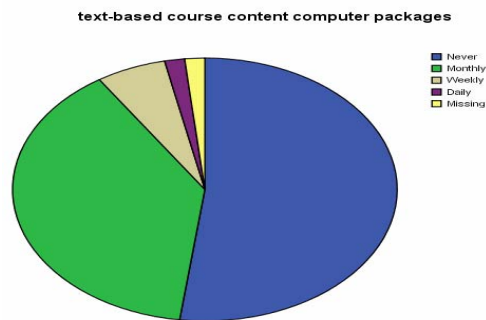
- **Text-based course content computer packages**

Figure 4.23   Text-based   computer   packages,   which   provide   scenarios   that   develop respondents' problem-solving skills (n=117)

Figure 4.23 indicates the frequency of respondents' exposure to text-based computer packages, which provide scenarios that develop their problem-solving skills; namely 62 (52.1%) never, 46 (38.7%) monthly, 7 (5.9%) weekly, and 2 (1.7%) daily. There were 2 (1.7%) missing values. The median score was 1.0 (never). Most of the respondents (52.1%) had never been exposed, while some (46.3%) had monthly or more frequent exposure. These results indicated non-utilisation, or at best, under-utilisation of this learning resource.
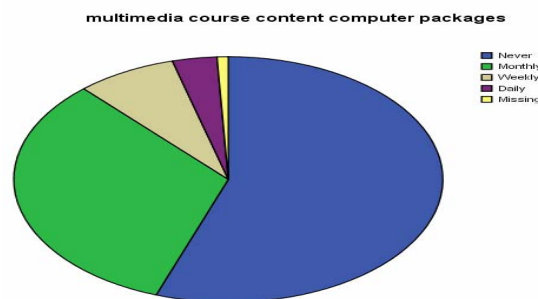
- **Multimedia course content computer packages**

Figure 4.24   Multimedia course content computer packages (n=118)

Figure 4.24 indicates the frequency of respondents' exposure to multimedia course content computer packages; namely 66 (55.5%) never, 39 (32.8%) monthly, 9 (7.6%) weekly, and 4 (3.4%) daily. There was 1 (0.8%) missing value. The median score was 1.0 (never). Most of the respondents (55.5%) had never been exposed, while some (43.8%) had monthly or more frequent exposure. These results indicated non-utilisation, or at best, under-utilisation of this learning resource.

- **Text-based computer packages which provide scenarios that develop my problem-solving skills**
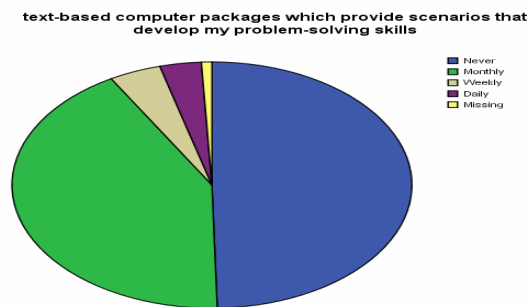

Figure 4.25   Text-based computer packages which provide scenarios that develop respondents' problem-solving skills (n=118)

Figure 4.25 indicates the frequency of respondents' exposure to text-based computer packages, which provide scenarios that develop their problem-solving skills; namely 59 (49.6%) never, 50 (42.0%) monthly, 5 (4.2%) weekly, and 4 (3.4%) daily. There was 1 (0.8%) missing value. The median score was 1.0 (never). Most of the respondents (49.6%) had monthly or more frequent exposure, while almost an equal number (49.6%) had never been exposed. These results indicated under-utilisation of this learning resource.

- **Multimedia computer packages which provide scenarios that develop my problem-solving skills**
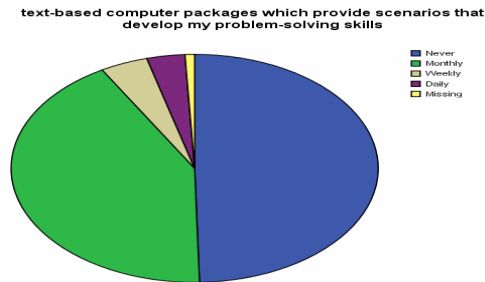

Figure 4.26 **Multimedia computer packages which provide scenarios that develop my problem-solving skills (n=119)**

Figure 4.26 indicates the frequency of respondents' exposure to multimedia computer packages, which provide scenarios that develop their problem-solving skills; namely 71 (59.7%) never, 39 (32.8%) monthly, 5 (4.2%) weekly, and 4 (3.4%) daily. The median score was 1.0 (never). Most of the respondents (59.7%) had never been exposed, while some (40.4%) had monthly or more frequent exposure. These results indicated non-utilisation, or at best, under-utilisation of this learning resource.

- **Computer packages simulating clinical situations which develop my decision-making skills**
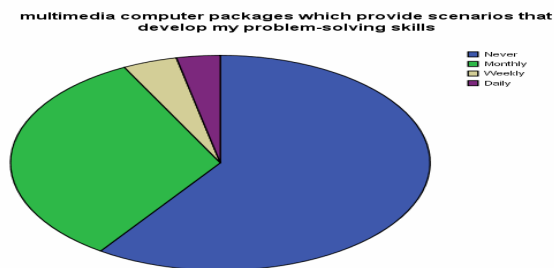

Figure 4.27 **Computer packages simulating clinical situations which develop respondents' decision-making skills (n=119)**

Figure 4.27 indicates the frequency of respondents' exposure to computer packages simulating clinical situations, which develop their decision-making skills; namely 79 (66.4%) never, 33 (27.7%) monthly, 2 (1.7%) weekly, and 5 (4.2%) daily. The median score was 1.0 (never). Most of

the respondents (66.4%) had never been exposed, while some (33.6%) had monthly or more frequent exposure. These results indicated non-utilisation, or at best, under-utilisation of this learning resource.

- **Computer packages which enable me to achieve my learning objectives though game-playing**
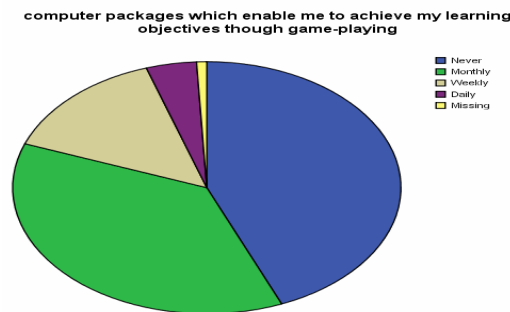

Figure 4.28   Computer packages which enable respondents' to achieve their learning objectives though game-playing (n=118)

Figure 4.28 indicates the frequency of respondents' exposure to computer packages, which enable them to achieve their learning objectives though game-playing; namely 52 (43.7%) never, 44 (37.0%) monthly, 17 (14.3%) weekly, and five (4.2%) daily. There was 1 (0.8%) missing value. The median score was 2.0 (monthly). While a slight majority of the respondents (55.5%) had been exposed monthly or more frequently, a substantial number (43.7%) had never been exposed. These results indicated under-utilisation of this learning resource.

4.2.2.3 Comparison between the responses of the second and third year respondents

The Mann-Whitney U-test indicated that there were no significant differences between the second and third year respondents responses on the following items:
- reading skills computer packages (p= 0.279)
- typing skills computer packages (p=0.459)
- computer literacy packages (p=0.310)
- text-based course content computer packages (p=0.787)
- multimedia course content computer packages (p=0.615)

- text-based computer packages which provide scenarios that develop my problem-solving skills (p=0.189)

- multimedia computer packages which provide scenarios that develop my problem-solving skills (p=0.257)

- computer packages simulating clinical situations which develop my decision-making skills (p=0.627)

- computer packages which enable me to achieve my learning objectives though game-playing (p=0.993).

4.2.3   Learner engagement in activities associated with computer assisted instruction.

Section C of the questionnaire comprised 13 items pertaining to the frequency to which respondents have engaged in specified activities associated with computer assisted instruction. The researcher discussed the results for both second and third year respondents starting with the second years.

4.2.3.1 Second year respondents

The research findings pertaining to the second year respondents are presented in the following section. The colour codes for the responses in the pie diagrams are as follows:

Daily;   *Weekly;*   *Monthly;*   *Never;*   *Missing values.*

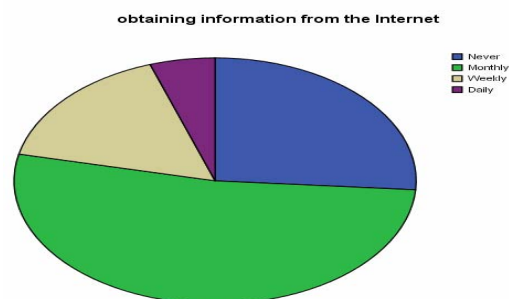- **Obtaining information from the Internet**

Figure 4.29   Obtaining information from the Internet (n=172)

Figure 4.29 indicates the frequencies to which respondents obtained information from the Internet; namely 45 (26.2%) never, 90 (52.3%) monthly, 28 (16.3%) weekly, and 9 (5.2%) daily. The median score was 2.0 (monthly). While most respondents (73.8%) obtained information from the Internet on a monthly basis or more frequently, a reasonable number (26.2%) indicated never. While this is an indication that the Internet is utilised for obtaining information, respondents could be motivated to utilise this learning resource more frequently.
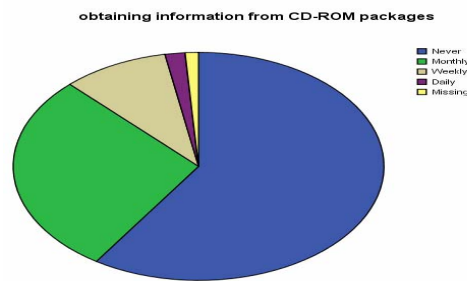
- **Obtaining information from CD-ROM packages**

Figure 4.30   Obtaining information from CD-ROM packages (n=170)

Figure 4.30 indicates the frequencies to which respondents obtained information from CD-ROM packages; namely 102 (59.3%) never, 49 (28.5%) monthly, 16 (9.3%) weekly, and 3 (1.7%) daily. There were 2 (1.2%) missing values. The median score was 1.0 (never). Most respondents (59.3%) were never engaged in obtaining information from CD ROM packages, while 39.5% did so monthly or more frequently. These results indicated non-utilisation, or at best, under-utilisation of CD-ROM packages for obtaining information.

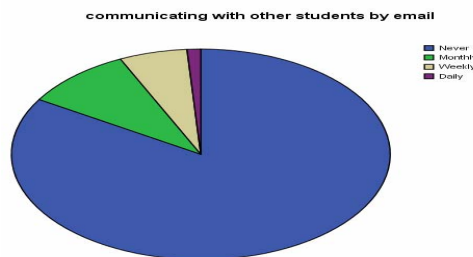- **Communicating with other learners by e mail**

Figure 4.31   Communicating with other learners by email (n=172)

Figure 4.31 indicates the frequency to which respondents communicated with their peers by email; namely 144 (83.7%) never, 16 (9.3%) monthly, 10 (5.8%) weekly and 2 (1.2%) daily. There were 2 (1.2%) missing values. The median score was 1.0 (never). A substantial majority of respondents (83.7%) were never engaged in electronic communication with their peers. These results indicated mainly, non-utilisation of this communication resource.

- **<u>Communicating with my tutors by email</u>**

Figure 4.32   Communicating with my tutors by email (n=172)

Figure 4.32 indicates the frequency to which respondents communicated with their tutors by email; namely, 171 (99.4%) never, and 1 (0.6%) monthly. The median score was 1.0 (never). These findings indicated that almost all respondents (99.4%) never communicated with their tutors by email. These results indicated non-utilisation of this communication resource.
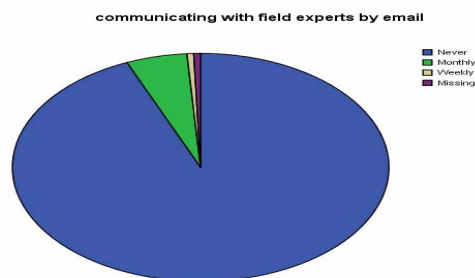
- **<u>Communicating with field experts by email</u>**

Figure 4.33   Communicating with field experts by email (n=171)

Figure 4.33 indicates the frequency to which respondents communicated with field experts by email; namely 106 (93.6%) never, 9 (5.2%) monthly, and 1 (0.6%) weekly. There was 1 (0.6%) missing value. The median score was 1.0 (never). A substantial majority of respondents (93.6%)

were never engaged in communicating with field experts by email. These results indicated non-utilisation of this communication resource.

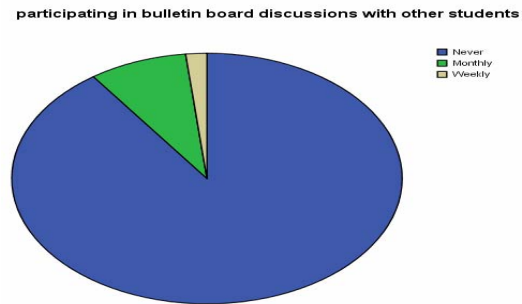- **Participating in bulletin board discussions with other learners**

Figure 4.34   Participating in bulletin board discussions with other learners (n=172)

Figure 4.34 indicates the frequency to which respondents participated in bulletin board discussions with their peers; namely 115 (90.1%) never, 14 (8.1%) monthly, and 3 (1.7%) weekly. The median score was 1.0 (never).

A substantial majority of respondents (90.1%) were never engaged in participating in bulletin board discussions with their peers. These results indicated non-utilisation of this communication resource.

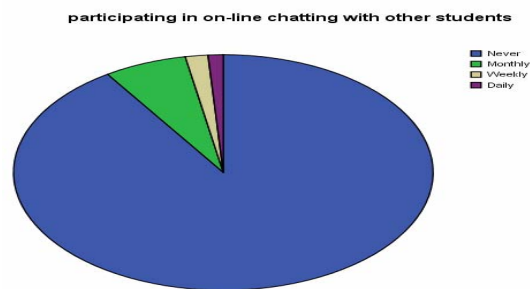- **Participating in on-line chatting with other learners**

Figure 4.35   Participating in on-line chatting with other learners (n=172)

Figure 4.35 indicates the frequency to which respondents participated in on-line chatting with their peers; namely 156 (90.7%) never, 11 (6.4%) monthly, and 3 (1.7%) weekly. The median score was 1.0 (never). A substantial majority of respondents (90.7%) were never engaged in participating in

on-line chatting with their peers. These results indicated non-utilisation of this communication resource.

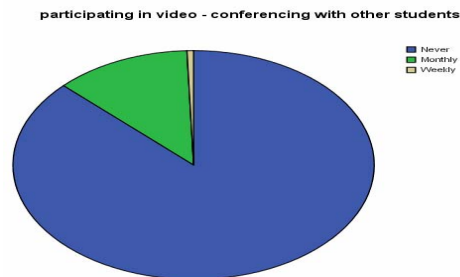- **Participating in video-conferencing with other learners**

Figure 4.36   Participating in video-conferencing with other learners (n=172)

Figure 4.36 indicates the frequency to which respondents participated in video-conferencing with their peers; namely 115 (87.2%) never, 21 (12.2%) monthly, and 1 (0.6%) weekly. The median score was 1.0 (never). A substantial majority of respondents (87.2%) were never engaged in participating in video-conferencing with their peers. These results indicated mainly non-utilisation of this communication resource.

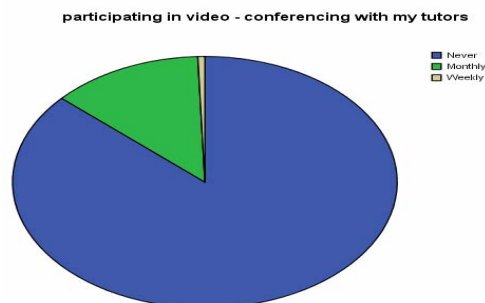- **Participating in video-conferencing with my tutors**

Figure 4.37   Participating in video-conferencing with my tutors (n=172)

Figure 4.37 indicates the frequency to which respondents participated in video-conferencing with their tutors; namely 149 (86.6%) never, 22 (12.8%) monthly, and 1 (0.6%) weekly. The median score was 1.0 (never). A substantial majority of respondents (86.6%) were never engaged in participating in video-conferencing with their tutors. These results indicated mainly non-utilisation of this communication resource.

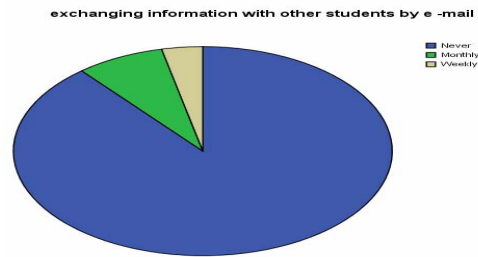- **Exchanging information with other learners by email**

exchanging information with other students by e -mail

Never
Monthly
Weekly

Figure 4.38   Exchanging information with other learners by email (n=172)

Figure 4.38 indicates the frequency to which respondents exchanged information with their peers by email; namely 153 (89.0%) never, 13 (7.6%) monthly, and 6 (3.5%) weekly. The median score was 1.0 (never). A substantial majority of respondents (89.0%) were never engaged in exchanging information with their peers by email. These results indicated mainly, non-utilisation of this communication resource.
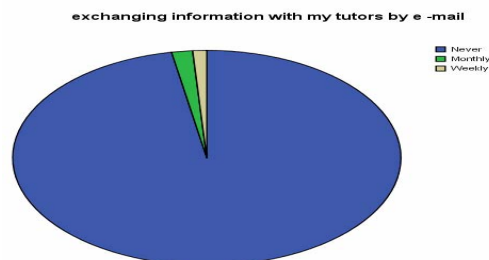
- **Exchanging information with my tutors by email**

exchanging information with my tutors by e -mail

Never
Monthly
Weekly

Figure 4.39   Exchanging information with my tutors by email (n=172)

Figure 4.39 indicates the frequency to which respondents exchanged information with their tutors by email, namely 167 (97.1%) never, 3 (1.7%) monthly, and 2 (1.2%) weekly. The median score was 1.0 (never). A substantial majority of respondents (97.1%) were never engaged in exchanging information with their tutors by email. These results indicated non-utilisation of this communication resource.

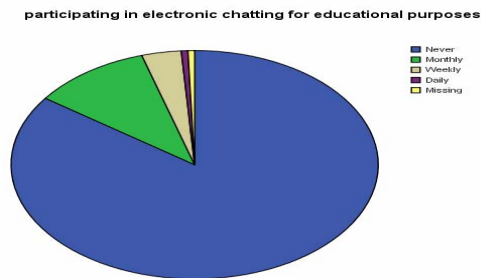- **Participating in electronic chatting for educational purposes**

Figure 4.40   Participating in electronic chatting for educational purposes (n=171)

Figure 4.40 indicates the frequency to which respondents participated in electronic chatting for educational purposes, namely 146 (84.9%) never, 18 (10.5%) monthly, 6 (3.5%) weekly, and 1 (0.6%) daily. There was 1 (0.6%) missing value. The median score was 1.0 (never). A substantial majority of respondents (84.9%) were never engaged in participating in electronic chatting for educational purposes. These results indicated mainly, non-utilisation of this communication resource.

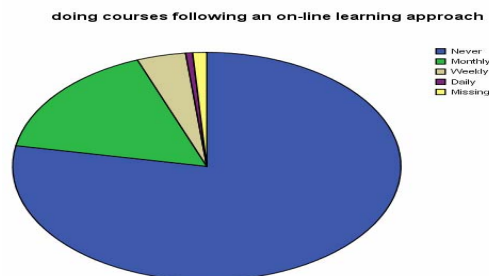- **Doing courses following an on-line learning approach**

Figure 4.41   Doing courses following an on-line learning approach (n=170)

Figure 4.41 indicates the frequency to which respondents did courses following an on-line learning approach; namely 134 (77.9%) never, 28 (16.3%) monthly, 7 (4.1%) weekly and 1 (0.6%) daily. There were 2 (1.2%) missing values. The median score was 1.0 (never). A substantial majority of respondents (77.9%) were never engaged in doing courses following an on-line learning approach. These results indicated non-utilisation of this learning approach.

4.2.3.2 <u>Third year respondents</u>

The research findings pertaining to the third year respondents are presented in the following section. The colour codes for the responses in the pie diagrams are as follows:

Daily;   *Weekly;*   *Monthly;*   *Never;*   *Missing values.*

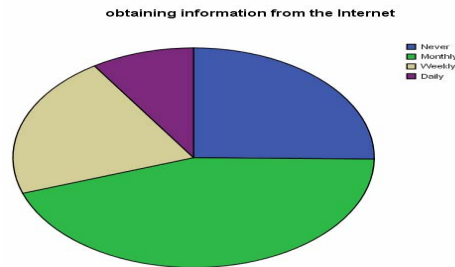- **<u>Obtaining information from the Internet</u>**

Figure 4.42   Obtaining information from the Internet (n=119)

Figure 4.42 indicates the frequency to which respondents obtained information from the Internet; namely, 30 (25.2%) never, 53 (44.5%) monthly, 25 (21.0%) weekly and 11 (9.2%) daily. The median score was 2.0 (monthly). Most respondents (74.7%) were engaged in obtaining information from the Internet monthly or more frequently. A reasonable number (25.2%) indicated never. While this is an indication that the Internet is utilised for obtaining information, respondents could be motivated to utilise this learning resource more frequently.

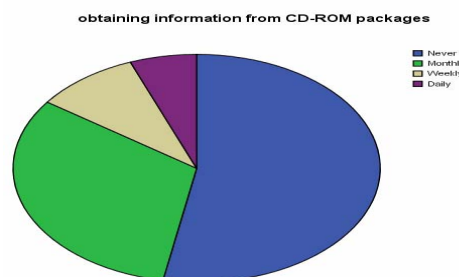- **<u>Obtaining information from CD-ROM packages</u>**

Figure 4.43   Obtaining information from CD-ROM packages (n=119)

Figure 4.43 indicates the frequency to which respondents obtain information from CD-ROM packages; namely 63 (52.9%) never, 38 (31.9%) monthly**,** 11 (9.2%) weekly, and 7 (5.9%) daily.

The median score was 1.0 (never). A slight majority of respondents (52.9%) were never engaged in obtaining information from CD ROM packages, while (47.0%) did so monthly or more frequently. These results indicated non-utilisation, or at best, under-utilisation of CD-ROM packages for obtaining information.

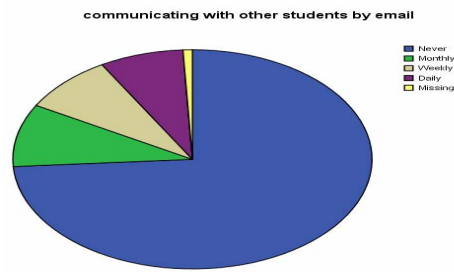- **Communicating with other learners by email**

Figure 4.44   Communicating with other learners by email (n=118)

Figure 4.44 indicates the frequency to which respondents communicated with their peers by email; namely 88 (73.9%) never, 11 (9.2%) monthly, 10 (8.4%) weekly and 9 (7.6%) daily. There was 1 (0.8%) missing value. The median score was 1.0 (never). Most respondents (83.7%) were never engaged in communicating with their peers by email, while a reasonable number (25.2%) did so monthly or more frequently. These results indicated non-utilisation of this communication resource.

- **Communicating with my tutors by email**

Figure 4.45   Communicating with my tutors by email (n=119)

Figure 4.45 indicates the frequency to which respondents communicated with their tutors by email; namely 115 (96.6%) never, 2 (1.7%) monthly, 1 (0.8%) weekly and 1 (0.8%) daily. The median

score was 1.0 (never). A substantial majority of respondents (96.6%) were never engaged in communicating with their tutors by email. These results indicated non-utilisation of this communication resource.
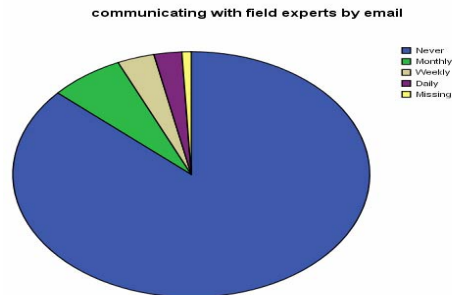
- **Communicating with field experts by email**

Figure 4.46   Communicating with field experts by email (n=118)

Figure 4.46 indicates the frequency to which respondents communicated with field experts by email; namely 103 (86.6%) never, 8 (6.7%) monthly, 4 (3.4%) weekly, and 3 (2.5%) daily. There was 1 (0.8%) missing value. The median score was 1.0 (never). A substantial majority of respondents (86.6%) were never engaged in communicating with field experts by email. These results indicated mainly, non-utilisation of this communication resource.

- **Participating in bulletin board discussions with other learners**
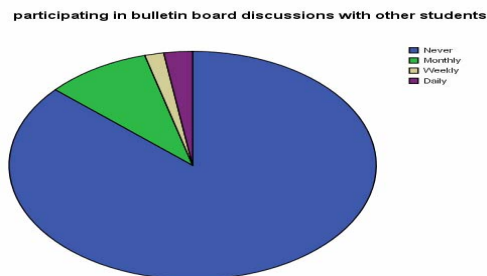

Figure 4.47   Participating in bulletin board discussions with other learners (n=119)

Figure 4.47 indicates the frequency to which respondents participated in bulletin board discussions with their peers; namely 103 (86.6%) never, 11 (9.2%) monthly, 2 (1.7%) weekly and 3 (2.5%) daily. The median score was 1.0 (never). A substantial majority of the respondents (86.6%) were

never engaged in participating in bulletin board discussions with their peers. These results indicated non-utilisation of this communication resource.

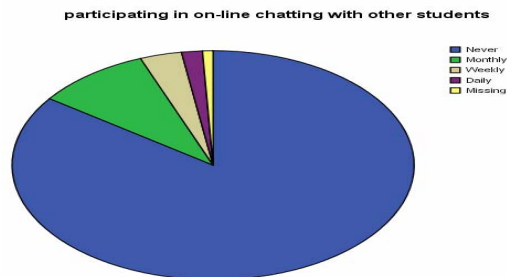- **Participating in on-line chatting with other learners**

Figure 4.48   Participating in on-line chatting with other learners (n=118)

Figure 4.48 indicates the frequency to which respondents participated in on-line chatting with their peers; namely 101 (84.9%) never, 11 (9.2%) monthly, 4 (3.4%) weekly, and 2 (1.7%) daily. The median score was 1.0 (never). There was 1 (0.8%) missing value. A substantial majority of the respondents (84.9%) were never engaged in participating in on-line chatting with their peers. These results indicated mainly, non-utilisation of this communication resource.

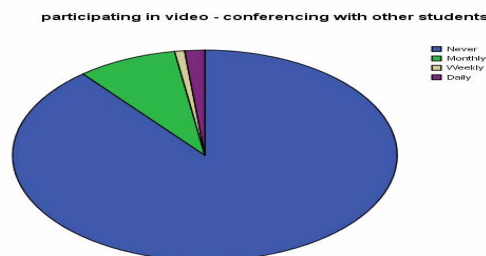- **Participating in video-conferencing with other learners**

Figure 4.49   Participating in video-conferencing with other learners (n=119)

Figure 4.49 indicates the frequency to which respondents participated in video-conferencing with their peers; namely 106 (89.1%) never, 10 (8.4%) monthly, 1 (0.8%) weekly, and 2 (1.7%) daily. The median score was 1.0 (never). A substantial majority of the respondents (89.1%) were never engaged in participating in video-conferencing with their peers. These results indicated mainly, non-utilisation of this communication resource.

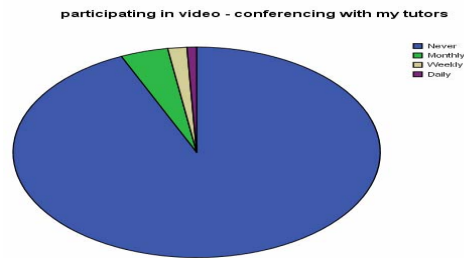- **Participating in video-conferencing with my tutors**

Figure 4.50   Participating in video-conferencing with my tutors (n=119)

Figure 4.50 indicates the frequency to which respondents participated in video-conferencing with their tutors; namely 111 (93.3%) never, 5 (4.2%) monthly, 2 (1.7%) weekly, and 1 (0.8%) daily. The median score was 1.0 (never). A substantial majority of the respondents (93.3%) were never engaged in participating in video-conferencing with their tutors. These results indicated non-utilisation of this communication resource.

- **Exchanging information with other learners by email**

Figure 4.51   Exchanging information with other learners by email (n=119)

Figure 4.51 indicates the frequency to which respondents exchanged information with other learners by email; namely 103 (86.6%) never, 9 (7.6%) monthly, 3 (2.5%) weekly, and 4 (3.4%) daily. The median score was 1.0 (never). A substantial majority of the respondents (86.6%) were never engaged in exchanging information with their peers by email. These results indicated mainly, non-utilisation of this communication resource.

- **Exchanging information with my tutors by email**

exchanging information with my tutors by e -mail
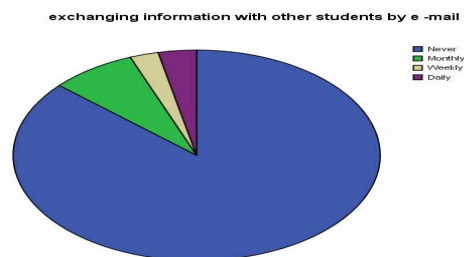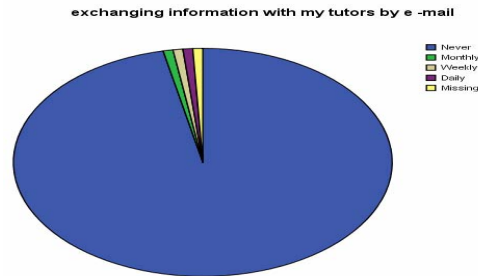
- Never
- Monthly
- Weekly
- Daily
- Missing

Figure 4.52   Exchanging information with my tutors by email (n=118)

Figure 4.52 indicates the frequency to which respondents exchanged information with their tutors by email; namely 115 (96.6%) never, 1 (0.8%) monthly, 1 (0.8%) weekly, and 1 (0.8%) daily. There was 1 (0.8%) missing value. The median score was 1.0 (never). A substantial majority of the respondents (96.6%) were never engaged in exchanging information with their tutors by email. These results indicated non-utilisation of this communication resource.

- **Participating in electronic chatting for educational purposes**

participating in electronic chatting for educational purposes

- Never
- Monthly
- Weekly
- Daily
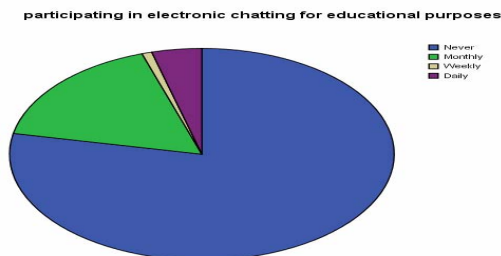
Figure 4.53   Participating in electronic chatting for educational purposes (n=119)

Figure 4.53 indicates the frequency to which respondents participated in electronic chatting for educational purposes; namely 93 (78.2%) never, 20 (16.8%) monthly, 1 (0.8%) weekly, and 5 (4.2%) daily. The median score was 1.0 (never). A substantial majority of the respondents (78.2%) were never engaged in participating in electronic chatting for educational purposes. These results indicated mainly, non-utilisation of this communication resource.

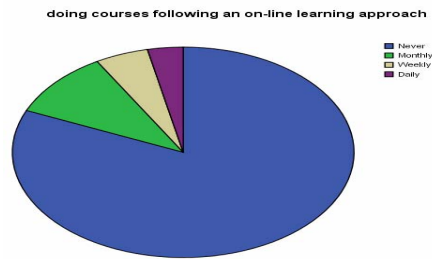- **<u>Doing courses following an on-line learning approach</u>**

Figure 4.54   Doing courses following an on-line learning approach (n=119)

Figure 4.54 indicates the frequency to which respondents did courses following an on-line learning approach; namely 97(81.5%) never, 12 (10.1%) monthly, 6 (5.0%) weekly, and 4 (3.4%) daily. The median score was 1.0 (never). A substantial majority of respondents (81.5%) were never engaged in doing courses following an on-line learning approach. These results indicated mainly, non-utilisation of this communication resource.

4.2.3.3 <u>Comparison between the responses of the second and third year respondents</u>

The Mann-Whitney U-test indicated that there were no significant differences between the second and third year respondents' responses on the following items:

- obtaining information from the Internet (p=0.234)
- obtaining information from CD-ROM packages (p=0.179)
- communicating with my tutors by email (p=0.072)
- participating in bulletin board discussions with other learners (p=0.318)
- participating in on-line chatting with other learners (p=0.176)
- participating in video-conferencing with other learners (p=0.681)
- participating in video-conferencing with my tutors (p=0.085)
- exchanging information with other learners by email (p=0.488)
- exchanging information with my tutors by email (p=0.864)
- participating in electronic chatting for educational purposes (p=0.114)
- doing courses following an on-line learning approach (p=0.729).

The Mann-Whitney U-test indicated that there were significant differences between the second and third year respondents' responses on the following items:

- communicating with other learners by e mail (p=0.032).

  The third year respondents (mean=1.49) appeared to communicate with other learners by email more frequently than second year respondents (mean=1.24).

- communicating with field experts by email (p=0.034).

  The third year respondents (mean=1.21) appeared to communicate with field experts by email more frequently than second year respondents (mean=1.06).

4.2.4   Benefits of computer assisted instruction

Section D of the questionnaire comprised 41 items pertaining to how respondents benefited from computer assisted instruction. The researcher discussed the results of both second and third year respondents starting with the second year responses.

4.2.4.1 Second year respondents

The research findings pertaining to the second year respondents are presented in the following section. The colour codes for the responses in the pie diagrams are as follows:

Strongly agree;   *Agree;*   **Disagree;**   *Strongly disagree;*   *Missing value*

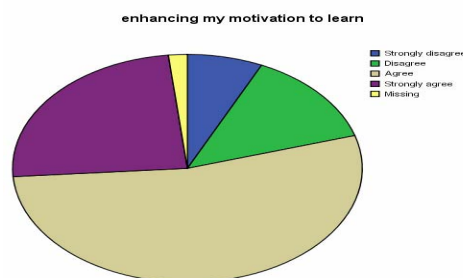- **Enhancing my' motivation to learn**

Figure 4.55   Enhancing my motivation to learn (n=169)

Figure 4.55 indicates the level of agreement on the statement that computer assisted instruction enhanced their motivation to learn; namely 12 (7.0%) strongly disagreed, 23 (13.4%) disagreed, 92 (53.5%) agreed, and 42 (24.4%) strongly agreed. There were 3 (1.8%) missing values. The median score was 3.0 (agree). A substantial majority of the respondents (77.9%) strongly agreed or agreed. Most respondents therefore benefited from enhanced motivation to learn.

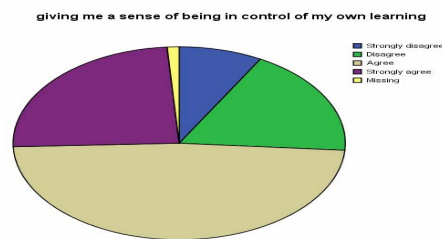- **<u>Giving me a sense of being in control of my own learning</u>**

Figure 4.56   Giving me a sense of being in control of my own learning (n=170)

Figure 4.56 indicates the level of agreement on the statement that computer assisted instruction gave them a sense of being in control of their own learning; namely 14 (8.1%) strongly disagreed, 31 (18.0%) disagreed, 83 (48.3%) agreed, and 42 (24.4%) strongly agreed. There were 2 (1.2%) missing values. The median score was 3.0 (agree). Although most of the respondents (72.7%) strongly agreed or agreed, a reasonable number (26.1%) disagreed or strongly disagreed. Most respondents therefore benefited from being in control, but this benefit needs to be extended to all learners.
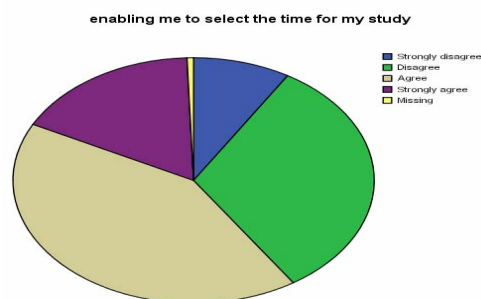
- **<u>Enabling me to select the time for my study</u>**

Figure 4.57   Enabling me to select the time for my study (n=171)

Figure 4.57 indicates the level of agreement on the statement that computer assisted instruction enabled them to select the time for their study; namely 15 (8.7%) strongly disagreed, 50 (32.0%) disagreed, 72 (42.0%) agreed, and 29 (17.0%) strongly agreed. There was 1 missing value. The median score was 3.0 (agree). Although a slight majority respondents (59.0%) agreed or strongly agreed, a substantial number (40.7%) disagreed or strongly disagreed. The respondents therefore generally benefited inadequately from flexibility in terms of study time.

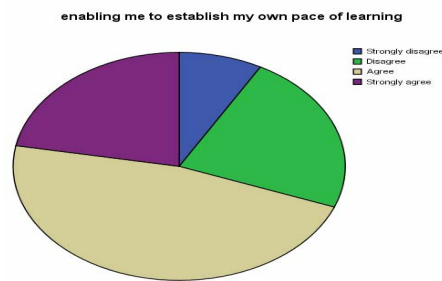- **Enabling me to establish my own pace of learning**

Figure 4.58   Enabling me to establish my own pace of learning (n=172)

Figure 4.58 indicates the level of agreement on the statement that computer assisted instruction enabled them to establish their own pace of learning; namely 14 (8.1%) strongly disagreed, 39 (22.7%) disagreed, 81 (47.1%) agreed, and 38 (22.1%) strongly agreed. The median score was 3.0 (agree). Although the majority of the respondents (69.2%) agreed or strongly agreed, a substantial number (30.8%) disagreed or strongly disagreed. The majority of respondents therefore benefited from flexibility in terms of learning pace, but this benefit needs to be extended to all learners.

- **Enabling me to discontinue learning when my concentration wavers**
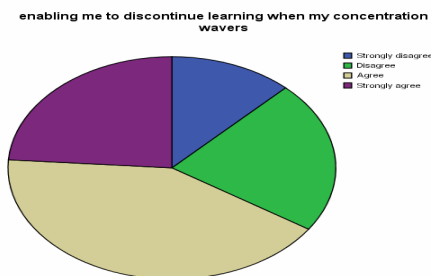

Figure 4.59   Enabling me to discontinue learning when my concentration wavers (n=172)

Figure 4.59 indicates the level of agreement on the statement that computer assisted instruction enabled them to discontinue learning when their concentration wavers; namely 21 (12.2%) strongly disagreed, 38 (22.1%) disagreed, 72 (41.9%) agreed, and 41 (23.8%) strongly agreed. The median score was 3.0 (agree). Although the majority of the respondents (65.7%) agreed or strongly agreed, a substantial number (34.3%) disagreed or strongly disagreed. The majority of respondents therefore benefited from flexibility in terms of resting time, but this benefit needs to be extended to all learners.

- **Enabling me to repeatedly study sections of the learning material until I gain understanding**
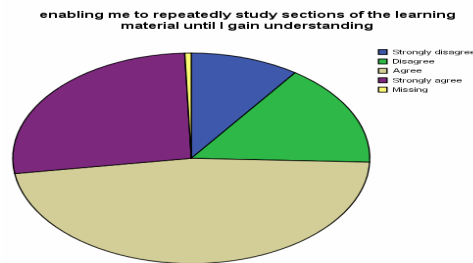

Figure 4.60   Enabling me to repeatedly study sections of the learning material until I gain understanding (n=171)

Figure 4.60 indicates the level of agreement on the statement that computer assisted instruction enabled them to repeatedly study sections of the learning material until they gained understanding; namely 17 (10.0%), strongly disagreed, 27 (15.7%) disagreed, 81 (47.1%) agreed, and 46 (26.7%) strongly agreed. There was 1 (0.6%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (73.8%) agreed or strongly agreed, a reasonable number (25.7%) disagreed or strongly disagreed. Most respondents therefore benefited from repetitive learning, but this benefit needs to be extended to all learners.

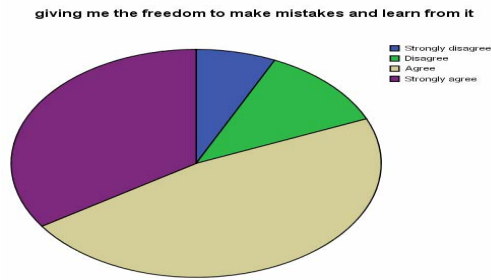- **<u>Giving me the freedom to make mistakes and learn from it</u>**

Figure 4.61   Giving me the freedom to make mistakes and learn from it (n=172)

Figure 4.61 indicates the level of agreement on the statement that computer assisted instruction gave them freedom to make mistakes and learn form it; namely 12 (7.0%) strongly disagreed, 20 (11.6%) disagreed, 81 (47.1%) agreed, and 59 (34.3%) strongly agreed. The median score was 3.0 (agree). A substantial majority of the respondents (81.4%) agreed or strongly agreed. Respondents therefore generally benefited from a learning climate supportive of learning from mistakes.
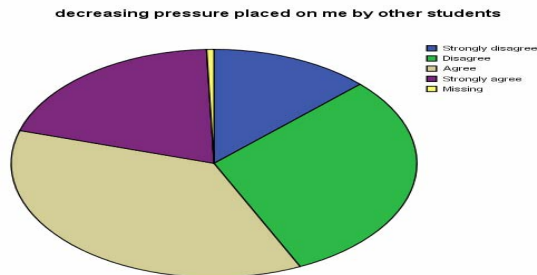
- **<u>Decreasing pressure placed on me by other learners</u>**

Figure 4.62   Decreasing pressure placed on me by other learners (n=171)

Figure 4.62 indicates the level of agreement on the statement that computer assisted instruction decreased pressure placed on them by other learners; namely 22 (12.8%) strongly disagreed, 52 (30.2%) disagreed, 63 (36.6%) agreed, and 34 (19.8%) strongly agreed. There was 1 (0.6%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (56.4%) agreed or strongly agreed, a slight minority (43.0%) disagreed or strongly disagreed. The respondents therefore did not adequately benefit from experiencing decreased peer pressure.

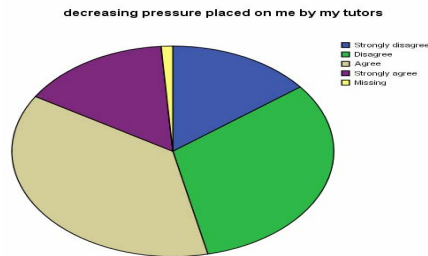- **Decreasing pressure placed on me by my tutors**

decreasing pressure placed on me by my tutors

■ Strongly disagree
■ Disagree
■ Agree
■ Strongly agree
■ Missing

Figure 4.63   Decreasing pressure placed on me by my tutors (n=170)

Figure 4.63 indicates the level of agreement on the statement that computer assisted instruction decreased pressure placed on them by their tutors; namely 25 (14.5%) strongly disagreed, 55 (32.0%) disagreed, 64 (37.2%) agreed, and 26 (15.1%) strongly agreed. There was 1 (0.6%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (52.3%) agreed or strongly agreed, a minority (46.5%) disagreed or strongly disagreed. The respondents therefore did not adequately benefit from decreased educator pressure.

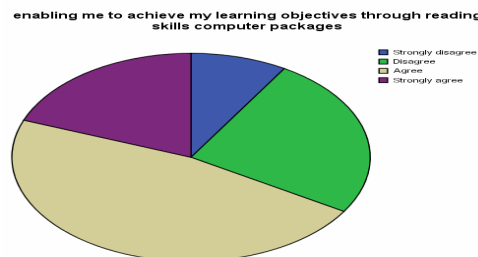- **Enabling me to achieve my learning objectives through reading skills computer packages**

enabling me to achieve my learning objectives through reading skills computer packages

■ Strongly disagree
■ Disagree
■ Agree
■ Strongly agree

Figure 4.64   Enabling me to achieve my learning objectives through reading skills computer packages (n=172)

Figure 4.64 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives through reading skills computer packages; namely 15 (8.7%) strongly disagreed, 43 (25.0%) disagreed, 81 (47.1%) agreed, and 33 (15.1%) strongly agreed. There was 1 (0.6%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (62.2%) agreed or strongly agreed, a substantial number (33.7%) disagreed or

strongly disagreed. Most respondents therefore benefited from improving their reading skills, but this benefit needs to be extended to all learners.

- **Enabling me to achieve my learning objectives through typing skills computer packages**
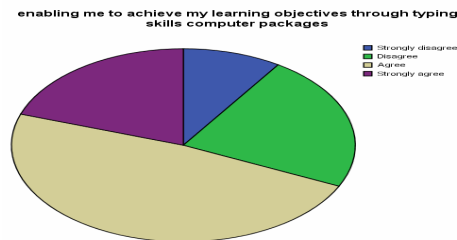

Figure 4.65   Enabling me to achieve my learning objectives through typing skills computer packages (n=171)

Figure 4.65 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives through typing skills computer packages; namely 16 (9.3%) strongly disagreed, 39 (22.7%) disagreed, 83 (48.3%) agreed, and 34 (19.8%) strongly agreed. There was 1 (0.6%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (68.1%) agreed or strongly agreed, a substantial number (32.0%) disagreed or strongly disagreed. Most respondents therefore benefited from improving their typing skills, but this benefit needs to be extended to all learners.

- **Enabling me to achieve my learning objectives when working through computer literacy packages**
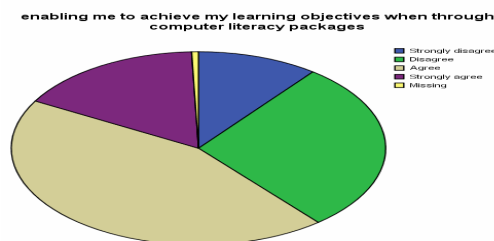

Figure 4.66   Enabling me to achieve my learning objectives when working through computer literacy packages (n=171)

Figure 4.66 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives when working through computer literacy packages; namely 16 (9.3%) strongly disagreed, 49 (28.5%) disagreed, 76 (44.2%) agreed, and 28 (16.3%) strongly agreed. There was 1 (0.6%) missing value. The median score was 3.0 (disagree). Although the majority of the respondents (60.5%) agreed or strongly agreed, a substantial number (37.8%) disagreed or strongly disagreed. Most respondents therefore benefited from improving their computer literacy, but this benefit needs to be extended to all learners.

- **Enabling me to achieve my learning objectives through text-based course content computer packages**
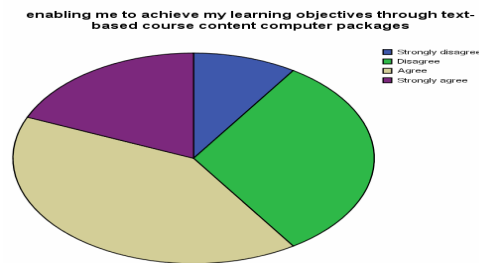

Figure 4.67   Enabling me to achieve my learning objectives through text-based course content computer packages (n=172)

Figure 4.67 indicates the level of agreement on the statement computer assisted instruction enabled them to achieve their learning objectives through text-based course content computer packages; namely 16 (9.3%) strongly disagreed, 54 (31.4%) disagreed, 70 (40.7%) agreed, and 32 (18.6%) strongly agreed. The median score was 3.0 (agree). Although the majority of the respondents (59.3%) agreed or strongly agreed, a substantial number (40.7%) disagreed or strongly disagreed. The respondents therefore did not adequately benefit from achieving their learning objectives through text-based course content computer packages.

- **<u>Enabling me to achieve my learning objectives through multimedia course content computer packages</u>**

enabling me to achieve my learning objectives through
multimedia course content computer packages

Strongly disagree
Disagree
Agree
Strongly agree

Figure 4.68   Enabling me to achieve my learning objectives through multimedia course content computer packages (n=172)

Figure 4.68 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives through multimedia course content computer packages; namely 16 (9.3%) strongly disagreed, 60 (34.9%) disagreed, 71 (41.3%) agreed, and 25 (14.5%) strongly agreed. The median score was 3.0 (agree). Although the majority of the respondents (55.8%) agreed or strongly agreed, a slight minority number (44.2%) disagreed or strongly disagreed. The respondents therefore did not adequately benefit from achieving their learning objectives through multimedia course content computer packages.

- **<u>Enabling me to achieve my learning objectives through text-based computer packages, which provide scenarios that develop my problem-solving skills</u>**

enabling me to achieve my learning objectives through text-
based computer packages which provide scenarios that
develop my problem-solving skills

Strongly disagree
Disagree
Agree
Strongly agree

Figure 4.69   Enabling me to achieve my learning objectives through text-based computer packages which provide scenarios that develop my problem-solving skills (n=172)

Figure 4.69 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives through text-based computer packages which provide scenarios that develop their problem-solving skills; namely 21 (12.2%) strongly disagreed, 46 (26.7%) disagreed, 82 (47.7%) agreed, and 23 (13.4%) strongly agreed. The median score was 3.0 (agree). Although the majority of the respondents (61.1%) agreed or strongly agreed, a substantial number (38.9%) disagreed or strongly disagreed. Most respondents therefore benefited from achieving their learning objectives through text-based problem oriented computer packages, but this benefit needs to be extended to all learners.

- **Enabling me to achieve my learning objectives through multimedia computer packages, which provide scenarios that develop my problem-solving skills**
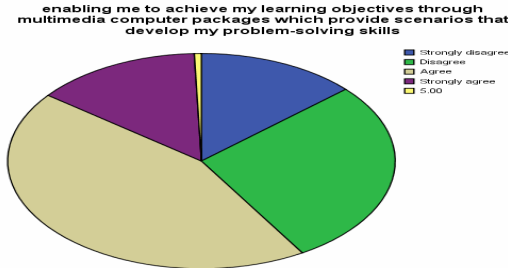

Figure 4.70   Enabling me to achieve my learning objectives through multimedia computer packages, which provide scenarios that develop my problem-solving skills (n=172)

Figure 4.70 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives through multimedia computer packages which provide scenarios that develop their problem-solving skills; namely 23 (13.4%) strongly disagreed, 48 (27.9%) disagreed, 76 (44.2%) agreed, and 24 (14.0%) strongly agreed. There was 1 (0.6%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (58.2%) agreed or strongly agreed, a slight minority (41.3%) disagreed or strongly disagreed. The respondents therefore did not adequately benefit from achieving their learning objectives through multimedia problem oriented computer packages.

- **Enabling me to achieve my learning objectives through computer packages simulating clinical situations, which develop my decision making skills**
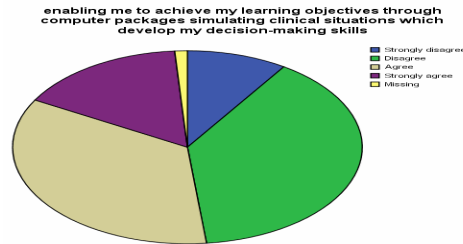

Figure 4.71 **Enabling me to achieve my learning objectives through computer packages simulating clinical situations, which develop my decision making skills (n=170)**

Figure 4.71 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives through computer packages simulating clinical situations which develop their decision making skills; namely 16 (9.3%) strongly disagreed, 16 (39.0%) disagreed, 60 (34.9%) agreed, and 27 (15.7%) strongly agreed. There were 2 (1.2%) missing values. The median score was 3.0 (disagree). Although the majority of the respondents (50.6%) agreed or strongly agreed, a slight minority (48.3%) disagreed or strongly disagreed. The respondents therefore did not adequately benefit from achieving their learning objectives through computer packages simulating clinical situations, which develop their decision-making skills.

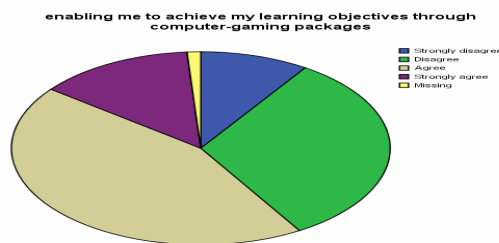- **Enabling me to achieve my learning objectives through computer-gaming packages**

Figure 4.72 **Enabling me to achieve my learning objectives through computer-gaming packages (n=170)**

Figure 4.72 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives through computer-gaming packages; namely 16 (9.3%) strongly disagreed, 55 (32.0%) disagreed, 76 (44.2%) agreed, and 23 (13.4%) strongly

agreed. There were 2 (1.2%) missing values. The median score was 3.0 (agree). Although the majority of the respondents (57.6%) agreed or strongly agreed, a slight minority (41.3%) disagreed or strongly disagreed. The respondents therefore did not adequately benefit from achieving their learning objectives through computer-gaming packages.

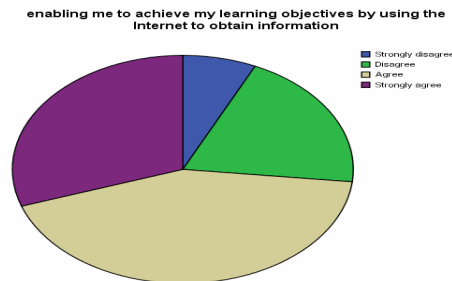- **Enabling me to achieve my learning objectives by using the Internet to obtain information**

Figure 4.73   Enabling me to achieve my learning objectives by using the Internet to obtain information (n=172)

Figure 4.73 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives by using the Internet to obtain information; namely 12 (7.0%) strongly disagreed, 34 (19.8%) disagreed, 74 (43.0%) agreed and 52 (30.2%) strongly agreed. The median score was 3.0 (agree). Although the majority of the respondents (73.2%) agreed or strongly agreed, a substantial number (26.8%) disagreed or strongly disagreed. Most respondents therefore benefited from using the Internet to obtain information, but this benefit needs to be extended to all learners.
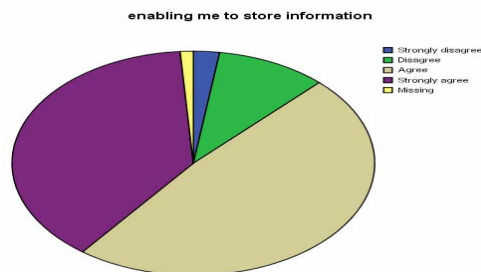
- **Enabling me to store information**

Figure 4.74   Enabling me to store information (n=170)

Figure 4.74 indicates the level of agreement on the statement that computer assisted instruction enabled them to store information; namely 4 (2.3%) strongly disagreed, 17 (9.9%) disagreed, 83 (48.3%) agreed, and 66 (38.4%) strongly agreed. There were 3 (1.7%) missing values. The median score was 3.0 (agree). A substantial majority of the respondents (86.7%) agreed or strongly agreed. Respondents therefore generally benefited from computer assisted instruction with regard to storing of information.
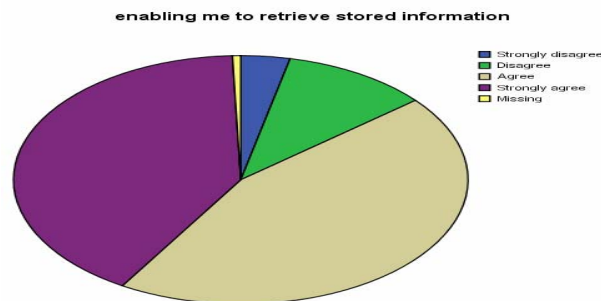
- **Enabling me to retrieve stored information**

Figure 4.75   Enabling me to retrieve stored information (n=171)

Figure 4.75 indicates the level of agreement on the statement that computer assisted instruction enabled them to retrieve stored information; namely 6 (3.5%) strongly disagreed, 18 (10.5%) disagreed, 77 (44.8%) agreed, and 70 (40.7%) strongly agreed. There was 1 (0.6%) missing value. The median score was 3.0 (agree). A substantial majority of the respondents (85.5%) agreed or strongly agreed. Respondents therefore generally benefited from computer assisted instruction with regard to retrieval of stored information.

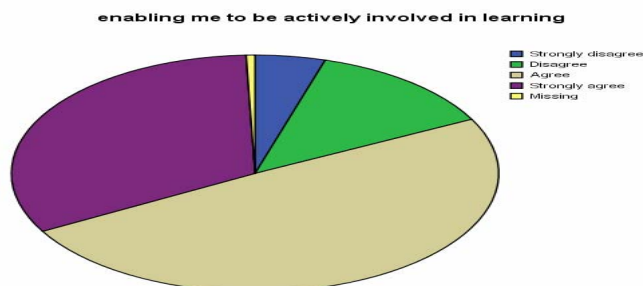- **Enabling me to be actively involved in learning**

Figure 4.76   Enabling me to be actively involved in learning (n=171)

Figure 4.76 indicates the level of agreement on the statement that computer assisted instruction enabled them to be actively involved in learning; namely 8 (4.7%) strongly disagreed, 22 (12.8%) disagreed, 85 (49.4%) agreed, and 56 (32.6%) strongly agreed. There was 1 (0.6%) missing value. The median score was 3.0 (agree). A substantial majority of the respondents (82.0%) agreed or strongly agreed. Respondents therefore generally benefited from active involvement during computer assisted instruction.
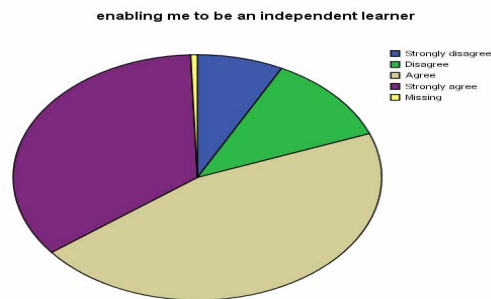
- **<u>Enabling me to be an independent learner</u>**

Figure 4.77   Enabling me to be an independent learner (n=171)

Figure 4.77 indicates the level of agreement on the statement that computer assisted instruction enabled them to be an independent learner; namely 13 (7.6%) strongly disagreed, 20 (11.6%) disagreed, 78 (45.3%) agreed, and 60 (34.9%) strongly agreed. There was 1 (0.6%) missing value. The median score was 3.0 (agree). A substantial majority of the respondents (80.2%) agreed or strongly agreed. Respondents therefore generally benefited from independence during computer assisted instruction.

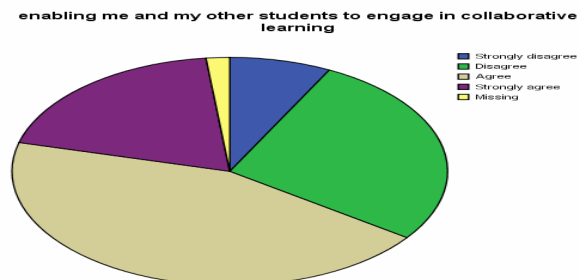- **<u>Enabling me and other learners to engage in collaborative learning</u>**

Figure 4.78   Enabling me and other learners to engage in collaborative learning (n=169)

Figure 4.78 indicates the level of agreement on the statement that computer assisted instruction enabled them and their peers to engage in collaborative learning; namely 13 (7.6%) strongly disagreed, 47 (27.3%) disagreed, 76 (44.2%) agreed, and 33 (19.2%) strongly agreed. There were 3 (1.7%) missing values. The median score was 3.0 (agree). Although the majority of the respondents (63.4%) agreed or strongly agreed, a substantial number (34.9%) disagreed or strongly disagreed. The majority of respondents therefore benefited from engaging in collaborative learning, but this benefit needs to be extended to all learners.

- **Enabling me to be up to date with the latest developments in the health sciences**
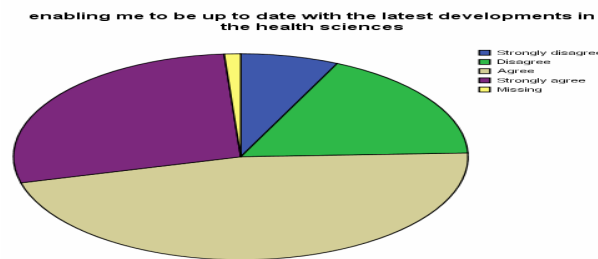

Figure 4.79   Enabling me to be up to date with the latest developments in the health sciences (n=170)

Figure 4.79 indicates the level of agreement on the statement that computer assisted instruction enabled them to be up to date with the latest developments in the health sciences, namely 12 (7.0 %) strongly disagreed, 30 (17.4%) disagreed, 80 (46.5%) agreed, and 48 (27.9%) strongly agreed. There were 2 (1.2%) missing values. The median score was 3.0 (agree). A substantial majority (46.5%) of the respondents agreed. Respondents therefore generally benefited from remaining up to date with the latest developments.
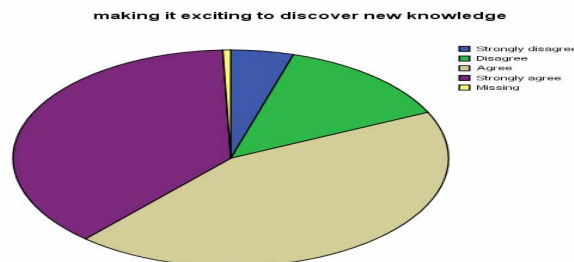
- **Making it exciting to discover new knowledge**

Figure 4.80   Making it exciting to discover new knowledge (n=171)

Figure 4.80 indicates the level of agreement on the statement that computer assisted instruction made it exciting to discover new knowledge; namely 8 (4.7%) strongly disagreed, 23 (13.4%) disagreed, 75 (43.6%) agreed, and 65 (37.8%) strongly agreed. There was 1 (0.6%) missing value. The median score was 3.0 (agree). A substantial majority of the respondents (81.4%) agreed or strongly agreed. Respondents therefore generally benefited from excitement associated with discovering new knowledge.

- **Relieving the boredom which I previously experienced during exposure to traditional teaching**
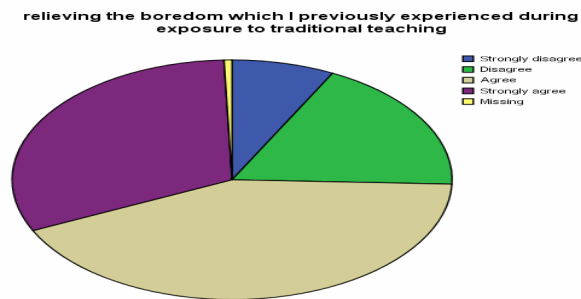

Figure 4.81   Relieving the boredom which I previously experienced during exposure to traditional teaching (n=171)

Figure 4.81 indicates the level of agreement on the statement that computer assisted instruction relieved the boredom, which they had previously experienced during exposure to traditional teaching; namely 13 (8.0%) strongly disagreed, 31 (18.0%) disagreed, 73 (42.4%) agreed, and 54 (31.4%) strongly agreed. There was 1 (0.6%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (73.8%) agreed or strongly agreed, a reasonable number (26.0%) disagreed or strongly disagreed. The majority of respondents therefore benefited from decreased boredom, but this benefit needs to be extended to all learners.

● __Providing extended interaction with other learners through electronic communication__

providing extended interaction with other students through electronic communication

Strongly disagree
Disagree
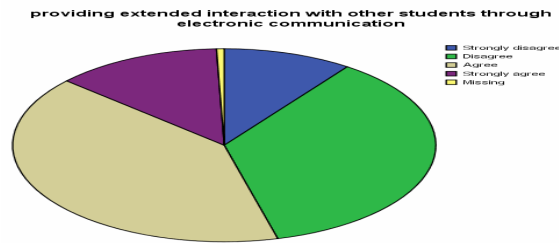Agree
Strongly agree
Missing

Figure 4.82   Providing extended interaction with other learners through electronic communication (n=171)

Figure 4.82 indicates the level of agreement on the statement that computer assisted instruction provided extended interaction with their peers through electronic communication; namely 17 (9.9%) strongly disagreed, 62 (36.0%) disagreed, 70 (40.7%) agreed and 22 (12.8%) strongly agreed. There was 1 (0.6%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (53.5%) agreed or strongly agreed, a slight minority (45.9%) disagreed or strongly disagreed. The respondents therefore did not benefit adequately from extended communication with peers.

● __Providing extended interaction with my tutors through electronic communication__

providing extended interaction with my tutors through electronic communication

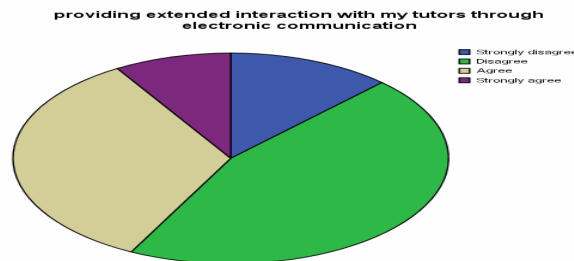Strongly disagree
Disagree
Agree
Strongly agree

Figure 4.83   Providing extended interaction with my tutors through electronic communication (n=172)

Figure 4.83 indicates the level of agreement on the statement that computer assisted instruction provided extended interaction with their tutors through electronic communication; namely 21 (12.2%) strongly disagreed, 78 (45.3%) disagreed, 58 (33.7%) agreed, and 15 (8.7%) strongly agreed. The median score was 3.0 (disagree). The majority of the respondents (57.5%) disagreed or strongly disagreed and a slight minority (42.4%) agreed or strongly agreed. The respondents therefore did not benefit adequately from electronic communication with their tutors.

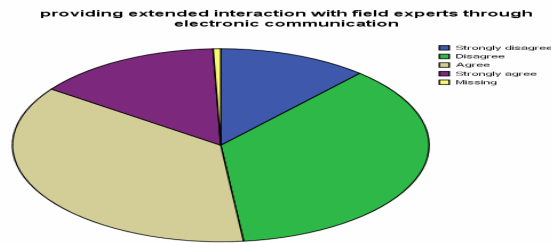- **<u>Providing extended interaction with field experts through electronic communication</u>**

Figure 4.84   Providing extended interaction with field experts through electronic communication (n=171)

Figure 4.84 indicates the level of agreement on the statement that computer assisted instruction provided extended interaction with field experts through electronic communication; namely 20 (11.6%) strongly disagreed, 63 (36.6%) disagreed, 63 (36.6%) agreed, and 25 (14.5%) strongly agreed. There was 1 (0.6%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (51.1%) agreed or strongly agreed, a minority (48.2%) disagreed or strongly disagreed. The respondents therefore did not adequately benefit from extended communication with field experts.

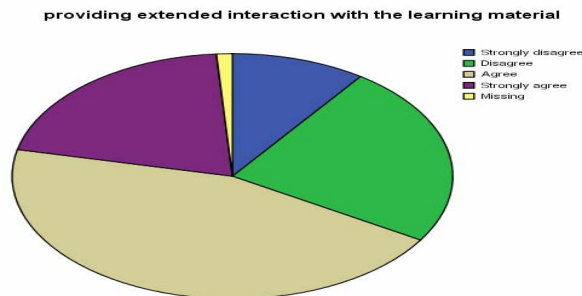- **<u>Providing extended interaction with the learning material</u>**

Figure 4.85   Providing extended interaction with the learning material (n=170)

Figure 4.85 indicates the level of agreement on the statement that computer assisted instruction provided extended interaction with the learning material; namely 17 (9.9%) strongly disagreed, 41 (23.8%) disagreed, 77 (44.8%) agreed, and 35 (20.3%) strongly agreed. There were 2 (1.2%) missing values. The median score was 3.0 (agree). Although the majority of the respondents (65.1%) agreed or strongly agreed, a substantial number (33.7%) disagreed or strongly disagreed.

The majority of respondents therefore benefited from extended interaction with the learning material, but this benefit needs to be extended to all learners.

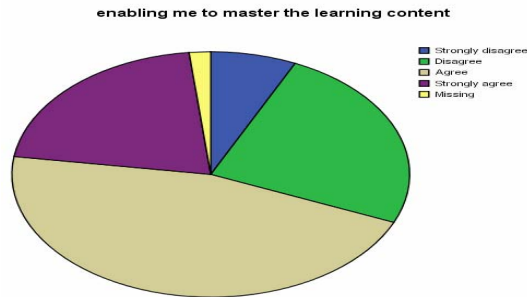- **Enabling me to master the learning content**

Figure 4.86   Enabling me to master the learning content (n=169)

Figure 4.86 indicates the level of agreement on the statement that computer assisted instruction enabled them to master the learning content; namely 12 (7.0%) strongly disagreed, 42 (24.4%) disagreed, 79 (45.9%) agreed, and 36 (20.9%) strongly agreed. There were 3 (1.7%) missing values. The median score was 3.0 (agree). Although the majority of the respondents (66.8%) agreed or strongly agreed, a substantial number (31.4%) disagreed or strongly disagreed. The majority of respondents therefore benefited from mastering the learning content, but this benefit needs to be extended to all learners.

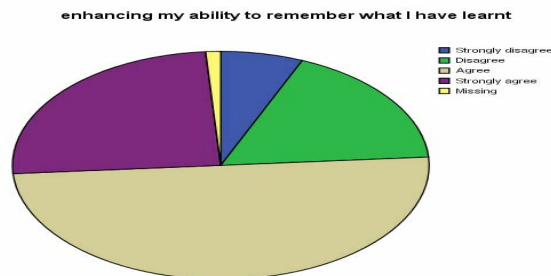- **Enhancing my ability to remember what I have learnt**

Figure 4.87   Enhancing my ability to remember what I have learnt (n=170)

Figure 4.87 indicates the level of agreement on the statement that computer assisted instruction enhanced their ability to remember what they have learnt; namely 11 (6.4%) strongly disagreed, 30 (17.4%) disagreed, 86 (50.0%) agreed, and 43 (25.0%) strongly agreed. There were 2 (1.2%)

missing values. The median score was 3.0 (agree). A substantial majority of respondents (75.0%) agreed or strongly agreed. Respondents therefore generally benefited from increased learning retention.

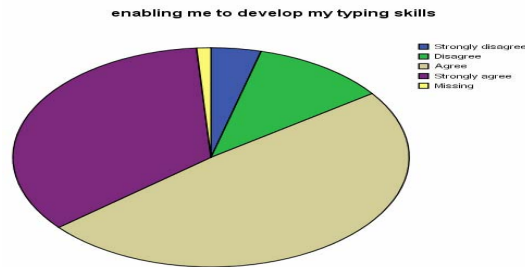- **Enabling me to develop my typing skills**

Figure 4.88   Enabling me to develop my typing skills (n=170)

Figure 4.88 indicates the level of agreement on the statement that computer assisted instruction enabled them to develop their typing skills; namely 7 (4.1%) strongly disagreed, 19 (11.0%) disagreed, 84 (48.8%) agreed and 60 (34.9%) strongly agreed. There were 2 (1.2%) missing values. The median score was 3.0 (agree). A substantial majority of the respondents (83.7%) agreed or strongly agreed. The respondents therefore generally benefited from increased typing skills.

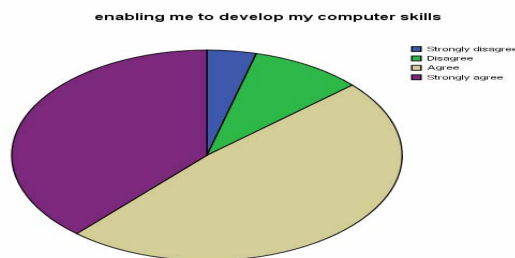- **Enabling me to develop my computer skills**

Figure 4.89   Enabling me to develop my computer skills (n=172)

Figure 4.89 indicates the level of agreement on the statement that computer assisted instruction enabled them to develop their computer skills; namely 7 (4.1%) strongly disagreed, 16 (9.3%) disagreed, 83 (48.3%) agreed, and 66 (38.4%) strongly agreed. The median score was 3.0 (agree). A substantial majority of the respondents (86.7%) agreed or strongly agreed. The respondents therefore generally benefited from increased computer skills.

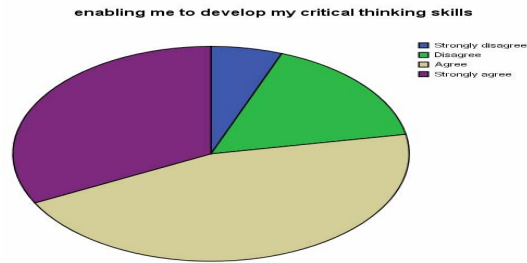- **Enabling me to develop my critical thinking skills**

Figure 4.90   Enabling me to develop my critical thinking skills (n=172)

Figure 4.90 indicates the level of agreement on the statement that computer assisted instruction enabled them to develop their critical thinking skills; namely 10 (5.8%) strongly disagreed, 28 (16.3%) disagreed, 78 (45.3%) agreed, and 56 (32.6%) strongly agreed. The median score was 3.0 (agree). A substantial majority of the respondents (77.9%) agreed or strongly agreed. Respondents therefore generally benefited from increased critical thinking skills.

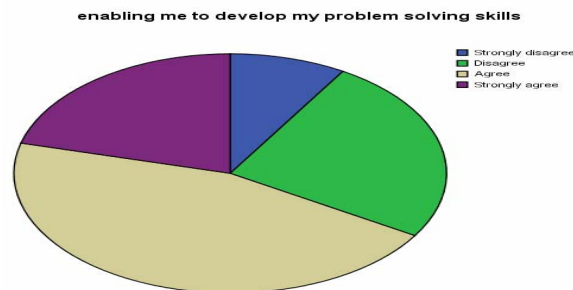- **Enabling me to develop my problem-solving skills**

Figure 4.91   Enabling me to develop my problem-solving skills (n=172)

Figure 4.91 indicates the level of agreement on the statement that computer assisted instruction enabled them to develop their problem-solving skills; namely 15 (8.7%) strongly disagreed, 43 (25.0%) disagreed, 78 (45.3%) agreed, and 36 (21.0%) strongly agreed. The median score was 3.0 (agree). Although the majority of the respondents (66.3%) agreed or strongly agreed, a substantial number (33.7%) disagreed or strongly disagreed. Most respondents therefore benefited from increased problem-solving skills, but this benefit needs to be extended to all learners.
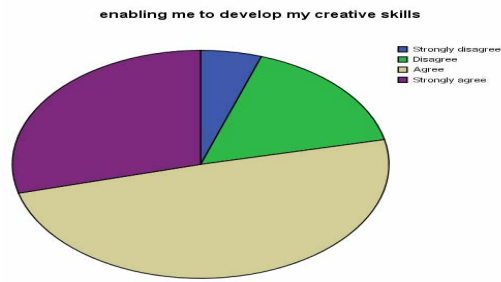
- **<u>Enabling me to develop my creative skills</u>**

Figure 4.92   Enabling me to develop my creative skills (n=172)

Figure 4.92 indicates the level of agreement on the statement that computer assisted instruction enabled them to develop their creative skills; namely 9 (5.2%) strongly disagreed, 28 (16.3%) disagreed, 85 (49.4%) agreed, and 50 (29.1%) strongly agreed. The median score was 3.0 (agree). A substantial majority of the respondents (78.5%) agreed or strongly agreed. The respondents therefore generally benefited from increased creative skills.

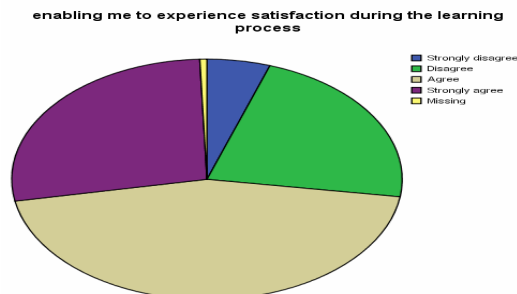- **<u>Enabling me to experience satisfaction during the learning process</u>**

Figure 4.93   Enabling me to experience satisfaction during the learning process (n=171)

Figure 4.93 indicates the level of agreement on the statement that computer assisted instruction enabled them to experience satisfaction during the learning process; namely 9 (5.2%) strongly disagreed, 38 (22.1%) disagreed, 77 (44.8%) agreed, and 47 (27.3%) strongly agreed. There was 1 (0.6%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (72.1%) agreed or strongly agreed, a reasonable number (27.3%) disagreed or strongly disagreed. Most respondents therefore benefited from experiences of satisfaction during the learning process, but this benefit needs to be extended to all learners.
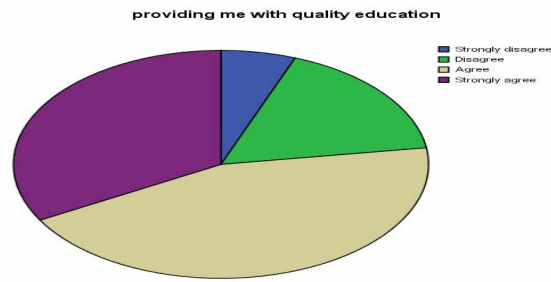
- **Providing me with quality education**

providing me with quality education

Figure 4.94   Providing me with quality education (n=172)

Figure 4.94 indicates the level of agreement on the statement that computer assisted instruction provided them with quality education; namely 10 (5.8%) strongly disagreed, 29 (16.9%) disagreed, 76 (44.2%) agreed, and 57 (33.1%) strongly agreed. The median score was 3.0 (agree). A substantial majority of the respondents (77.3%) agreed or strongly agreed. Respondents therefore generally benefited from quality education.

4.2.4.2 Third year respondents
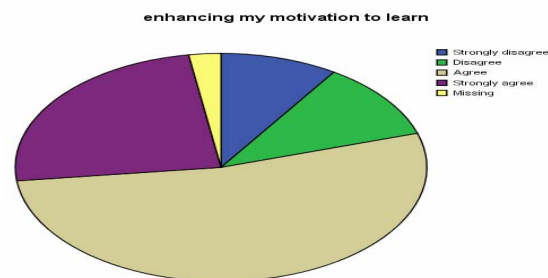
- **Enhancing my motivation to learn**

enhancing my motivation to learn

Figure 4.95   Enhancing my motivation to learn (n=116)

Figure 4.95 indicates the level of agreement on the statement that indicates that computer assisted instruction enhanced their motivation to learn; namely 11 (9.2%) strongly disagreed, 13 (10.9%) disagreed, 63 (52.9%) agreed, and 29 (24.4%) strongly agreed. There were 3 (2.5%) missing values. The median score was 3.0 (agree). A substantial majority of the respondents (77.3%) agreed or strongly agreed. Respondents therefore generally benefited from increased motivation to learn.

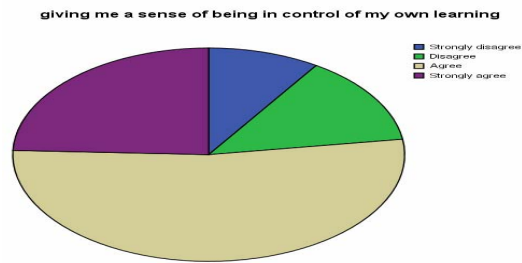- **Giving me a sense of being in control of my own learning**

Figure 4.96   Giving me a sense of being in control of my own learning (n=119)

Figure 4.96 indicates the level of agreement on the statement that computer assisted instruction gave them a sense of being in control of their own learning; namely 11 (9.2%) strongly disagreed, 16 (13.4%) disagreed, 63 (52.9%) agreed, and 29 (24.4%) strongly agreed. The median score was 3.0 (agree). A substantial majority of the respondents (77.3%) agreed or strongly agreed. Respondents therefore generally benefited from being in control of their own learning.

- **Enabling me to select the time for my study**

Figure 4.97   Enabling me to select the time for my study (n=118)

Figure 4.97 indicates the level of agreement on the statement that computer assisted instruction enabled them to select the time for their study; namely 17(14.3%) strongly disagreed, 26 (22.0%) disagreed, 59 (29.6%) agreed, and 29 (24.4%) strongly agreed. There was 1 (0.8%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (54.0%) agreed or strongly agreed, a substantial number (36.3%) disagreed or strongly disagreed. Most respondents therefore benefited from flexibility in terms of study time, but this benefit needs to be extended to all learners.

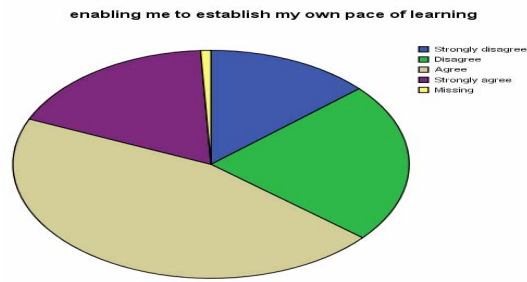- **Enabling me to establish my own pace of learning**

Figure 4.98   Enabling me to establish my own pace of learning (n=118)

Figure 4.98 indicates the level of agreement on the statement that computer assisted instruction enabled them to establish their own pace of learning; namely 16 (13.4%) strongly disagreed, 27 (2.3%) disagreed, 54 (45.4%) agreed, and 21 (17.6%) strongly agreed. There was 1 (0.8%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (63.0%) agreed or strongly agreed, a substantial number (36.3%) disagreed or strongly disagreed. Most respondents therefore benefited from flexibility in terms of pace of learning, but this benefit needs to be extended to all learners.

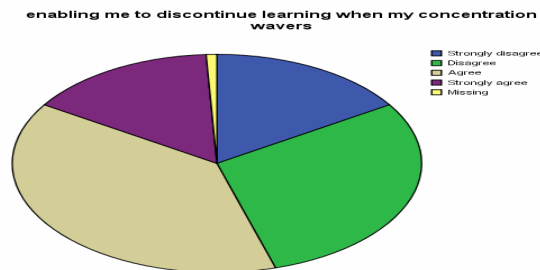- **Enabling me to discontinue learning when my concentration wavers**

Figure 4.99   Enabling me to discontinue learning when my concentration wavers (n=118)

Figure 4.99 indicates the level of agreement on the statement that computer assisted instruction enabled them to discontinue the learning when their concentration wavers; namely 19 (16.0%) strongly disagreed, 35 (29.4%) disagreed, 46 (38.7%) agreed, and 18 (15.1%) strongly agreed. There was 1 (0.8%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (53.8%) agreed or strongly agreed, a slight minority (45.4%) disagreed or strongly

disagreed. The respondents therefore did not adequately benefit from flexibility to discontinue their learning when their concentration wavers.

- **Enabling me to repeatedly study sections of the learning material until I gain understanding**
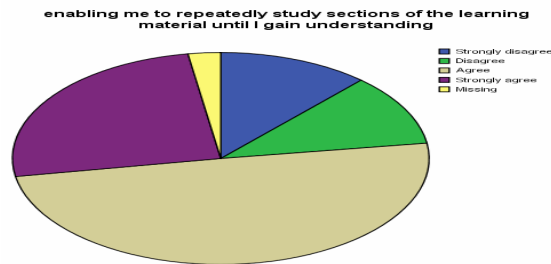

Figure 4.100 Enabling me to repeatedly study sections of the learning material until I gain understanding (n=116)

Figure 4.100 indicates the level of agreement on the statement that computer assisted instruction enabled them to repeatedly study sections of the learning material until they gain understanding; namely 14 (11.8%) strongly disagreed, 13 (10.9%) disagreed, 59 (49.6%) agreed, and 30 (25.2%) strongly agreed. There were 3 (2.5%) missing values. The median score was 3.0 (agree). A substantial majority of the respondents (74.8%) agreed or strongly agreed. Respondents therefore generally benefited from the principle of repetitive learning.

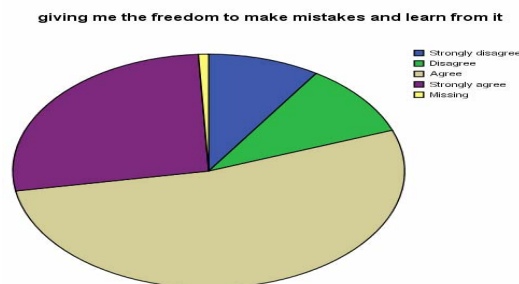- **Giving me the freedom to make mistakes and learn from it**

Figure 4.101 Giving me the freedom to make mistakes and learn from it (n=118)

Figure 4.101 indicates the level of agreement on the statement that computer assisted instruction gave them the freedom to make mistakes and learn form it; namely 11 (9.2%) strongly disagreed, 12

(10.1%) disagreed, 63 (52.9%) agreed, and 32 (26.9%) strongly agreed. There was 1 (0.8%) missing value. The median score was 3.0 (agree). A substantial majority of the respondents (79.8%) agreed or strongly agreed. Respondents therefore generally benefited from a learning climate supportive of learning from mistakes.

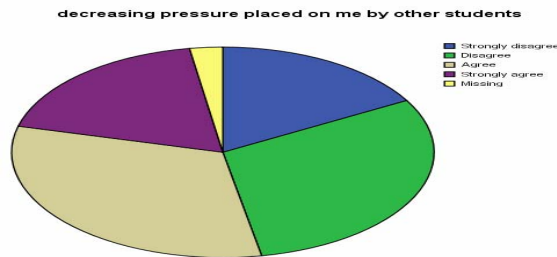- **Decreasing pressure placed on me by other learners**

Figure 4.102   **Decreasing pressure placed on me by other learners (n=116)**

Figure 4.102 indicates the level of agreement on the statement that computer assisted instruction decreased pressure placed on them by other learners; namely 22 (16.8%) strongly disagreed, 36 (30.3%) disagreed, 38 (31.9%) agreed, and 22 (18.5%) strongly agreed. There were 3 (2.5%) missing values. The median score was 3.0 (agree). Although most respondents (50.4%) agreed or strongly agreed, a slight minority (47.1%) disagreed or strongly disagreed. The respondents therefore did not adequately benefit from experiencing decreased peer pressure.
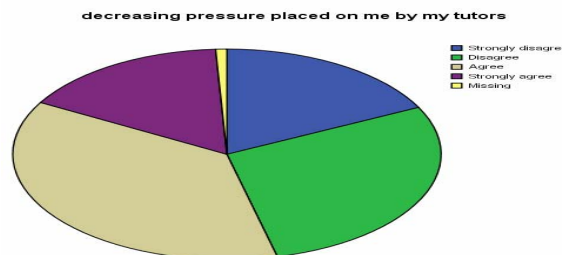
- **Decreasing pressure placed on me by my tutors**

Figure 4.103   **Decreasing pressure placed on me by my tutors (n=118)**

Figure 4.103 indicates the level of agreement on the statement that computer assisted instruction decreased pressure placed on them by their tutors; namely 21 (17.6%) strongly disagreed, 34 (28.6%) disagreed, 44 (37.0%) agreed, and 19 (16.0%) strongly agreed. There was 1 (0.8%) missing

value. The median score was 3.0 (agree). Although the majority of the respondents (53.0%) agreed or strongly agreed, a slight minority (46.2%) disagreed or strongly disagreed. The respondents therefore did not adequately benefit from decreased educator pressure.

- **Enabling me to achieve my learning objectives through reading skills computer packages**
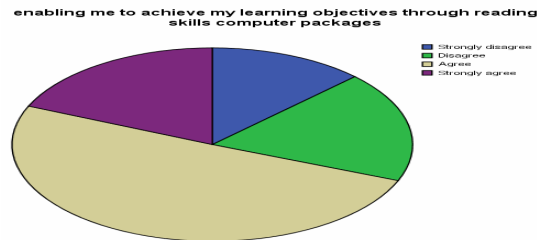

Figure 4.104   Enabling me to achieve my learning objectives through reading skills computer packages (n=119)

Figure 4.104 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives through reading skills computer packages; namely 15 (12.6%) strongly disagreed, 22 (18.5%) disagreed, 60 (50.4%) agreed, and 22 (18.5%) strongly agreed. There was 1 (0.6%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (68.9%) agreed or strongly agreed, a substantial number (31.1%) disagreed or strongly disagreed. Most respondents therefore benefited from improving their reading skills through computer assisted instruction, but this benefit needs to be extended to all learners.

- **Enabling me to achieve my learning objectives through typing skills computer packages**
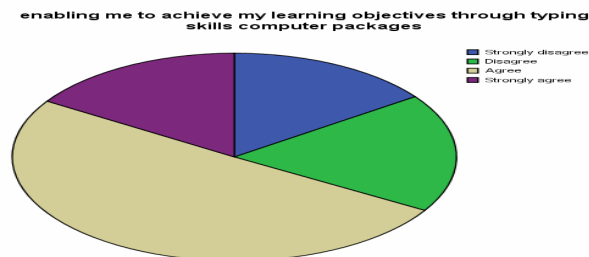

Figure 4.105   Enabling me to achieve my learning objectives through typing skills computer packages (n=119)

Figure 4.105 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives through typing skills computer packages; namely 18 (15.1%) strongly disagreed, 22 (18.5%) disagreed, 60 (50.4%) agreed, and 19 (16.0%) strongly agreed. The median score was 3.0 (agree). Although the majority of the respondents (66.4%) agreed or strongly agreed, a substantial number (33.6%) disagreed or strongly disagreed. Most respondents therefore benefited from improving their typing skills through computer assisted instruction, but this benefit needs to be extended to all learners.

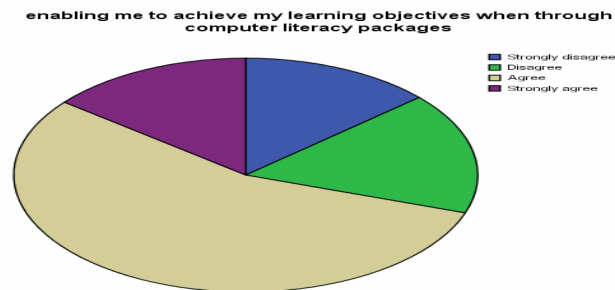- **Enabling me to achieve my learning objectives when working through computer literacy packages**

Figure 4.106   Enabling me to achieve my learning objectives when working through computer literacy packages (n=119)

Figure 4.106 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives when working through computer literacy packages; namely 16 (13.4%) strongly disagreed, 20 (16.8%) disagreed, 66 (56.5%) agreed, and 17 (14.3%) strongly agreed. The median score was 3.0 (agree). Although the majority of the respondents (70.8%) agreed or strongly agreed, a substantial number (30.2%) disagreed or strongly disagreed. Most respondents therefore benefited from improving their computer literacy through computer assisted instruction, but this benefit needs to be extended to all learners.

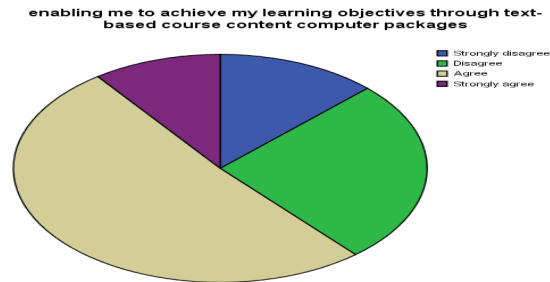- **Enabling me to achieve my learning objectives through text-based course content computer packages**

enabling me to achieve my learning objectives through text-based course content computer packages

- Strongly disagree
- Disagree
- Agree
- Strongly agree

Figure 4.107   Enabling me to achieve my learning objectives through text-based course content computer packages (n=119)

Figure 4.107 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives through text-based course content computer packages; namely 15 (12.6%) strongly disagreed, 31 (26.1%) disagreed, 61 (51.3%) agreed, and 12 (10.1%) strongly agreed. The median score was 3.0 (agree). Although the majority of the respondents (61.4%) agreed or strongly agreed, a substantial number (38.7%) disagreed or strongly disagreed. Most respondents therefore benefited from achieving their learning objectives through text-based course content computer packages, but this benefit needs to be extended to all learners.

- **Enabling me to achieve my learning objectives through multimedia course content computer packages**
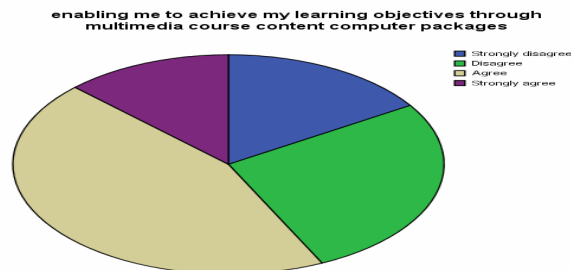

enabling me to achieve my learning objectives through multimedia course content computer packages

- Strongly disagree
- Disagree
- Agree
- Strongly agree

Figure 4.108   Enabling me to achieve my learning objectives through multimedia course content computer packages (n=119)

Figure 4.108 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives through multimedia course content computer packages; namely 19 (16.0%) strongly disagreed, 32 (26.9%) disagreed, 53 (44.5%) agreed, and 15 (12.6%) strongly agreed. The median score was 3.0 (agree). Although the majority of the respondents (57.1%) agreed or strongly agreed, a slight minority (42.9%) disagreed or strongly disagreed. The respondents therefore did not adequately benefit from achieving their learning objectives through multimedia course content computer packages.

- **Enabling me to achieve my learning objectives through text-based computer packages, which provide scenarios that develop my problem-solving skills**

enabling me to achieve my learning objectives through text-based computer packages which provide scenarios that develop my problem-solving skills

■ Strongly disagree
■ Disagree
□ Agree
■ Strongly agree

Figure 4.109   Enabling me to achieve my learning objectives through text-based computer packages which provide scenarios that develop my problem-solving skills (n=118)

Figure 4.109 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives through text-based computer packages which provide scenarios that develop their problem-solving skills; namely 18 (15.1%) strongly disagreed, 29 (24.4%) disagreed, 55 (46.2%) agreed and 17 (14.3%) strongly agreed. There was 1 (0.6%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (60.5%) agreed or strongly agreed, a substantial number (39.5%) disagreed or strongly disagreed. Most respondents therefore benefited from achieving their learning objectives through text-based problem oriented computer packages, but this benefit needs to be extended to all learners.

- **Enabling me to achieve my learning objectives through multimedia computer packages, which provide scenarios that develop my problem-solving skills**
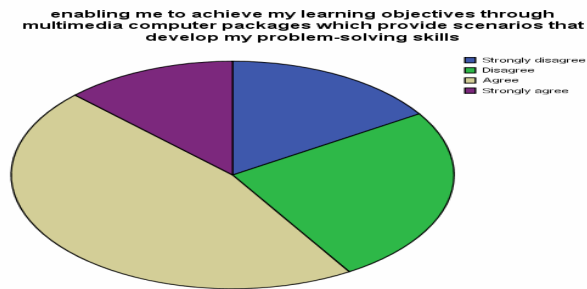

Figure 4.110 Enabling me to achieve my learning objectives through multimedia computer packages, which provide scenarios that develop my problem-solving skills (n=119)

Figure 4.110 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives through multimedia computer packages, which provide scenarios that develop their problem-solving skills; namely 19 (16.0%) strongly disagreed, 30 (25.2%) disagreed, 55 (46.2%) agreed, and 15 (12.6%) strongly agreed. The median score was 3.0 (agree). Although the majority of the respondents (58.8%) agreed or strongly agreed, a slight minority (41.2%) disagreed or strongly disagreed. The respondents therefore did not adequately benefit from achieving their learning objectives through multimedia problem-oriented computer packages.

- **Enabling me to achieve my learning objectives through computer packages simulating clinical situations, which develop my decision-making skills**

Figure 4.111   Enabling me to achieve my learning objectives through computer packages simulating clinical situations, which develop my decision-making skills (n=118)

Figure 4.111 indicates the level of agreement on the statement that that computer assisted instruction enabled them to achieve their learning objectives through computer packages simulating clinical situations, which develop their decision making skills; namely 16 (13.4%) strongly disagreed, 34 (28.6%) disagreed, 55 (46.2%) agreed, and 13 (10.9%) strongly agreed. There was 1 (0.8%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (57.1%) agreed or strongly agreed, a slight minority (42.0%) disagreed or strongly disagreed. The respondents therefore did not adequately benefit from achieving their learning objectives through computer packages simulating clinical situations, which develop their decision-making skills.

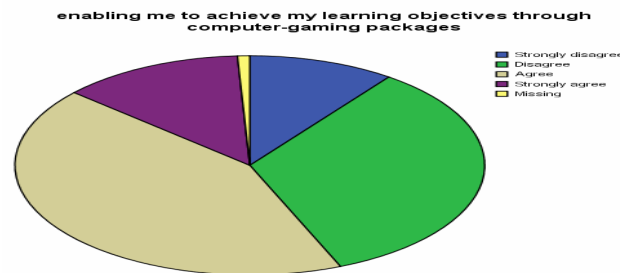- **<u>Enabling me to achieve my learning objectives through computer-gaming packages</u>**

Figure 4.112   Enabling me to achieve my learning objectives through computer-gaming packages (n=119)

Figure 4.112 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives through computer-gaming packages; namely 12 (10.1%) strongly disagreed, 40 (33.6%) disagreed, 51 (42.9%) agreed, and 15 (12.6%) strongly agreed. There was 1 (0.8%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (55.5%) agreed or strongly agreed, a slight minority (43.7%) disagreed or strongly disagreed. The respondents therefore did not adequately benefit from achieving their learning objectives through computer-gaming packages.

- **Enabling me to achieve my learning objectives by using the Internet to obtain information**
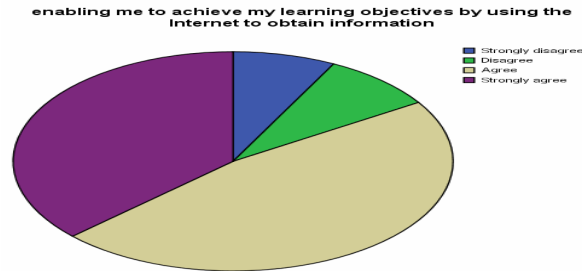

Figure 4.113   Enabling me to achieve my learning objectives by using the Internet to obtain information (n=119)

Figure 4.113 indicates the level of agreement on the statement that computer assisted instruction enabled them to achieve their learning objectives by using the Internet to obtain information; namely 9 (7.6%) strongly disagreed, 10 (8.4%) disagreed, 56 (47.1%) agreed, and 44 (37.0%) strongly agreed. The median score was 3.0 (agree). The majority of the respondents (84.1%) agreed or strongly agreed. The respondents therefore generally benefited from using the Internet to obtain information.
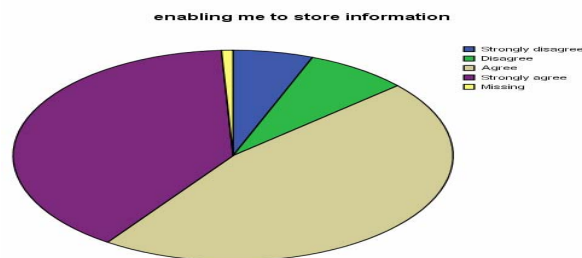
- **Enabling me to store information**

Figure 4.114   Enabling me to store information (n=118)

Figure 4.114 indicates the level of agreement on the statement that computer assisted instruction enabled them to store information; namely 7 (5.9%) strongly disagreed, 9 (7.6%) disagreed, 55 (46.2%) agreed, and 47 (39.5%) strongly agreed. There was 1 (0.8%) missing value. The median score was 3.0 (agree). A substantial majority of the respondents (85.7%) agreed or strongly agreed.

Respondents therefore generally benefited from computer assisted instruction with regard to storing of information.
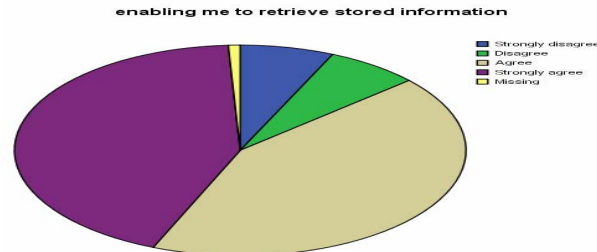
- **<u>Enabling me to retrieve stored information</u>**

Figure 4.115   **Enabling me to retrieve stored information (n=118)**

Figure 4.115 indicates the level of agreement on the statement that computer assisted instruction enabled them to retrieve stored information; namely 8 (6.7%) strongly disagreed, 8 (6.7%) disagreed, 51 (42.9%) agreed, and 51 (42.9%) strongly agreed. There was 1 (0.8%) missing value. The median score was 3.0 (agree). A substantial majority of the respondents (85.8%) agreed and strongly agreed. Respondents therefore generally benefited from computer assisted instruction with regard to retrieval of stored information.
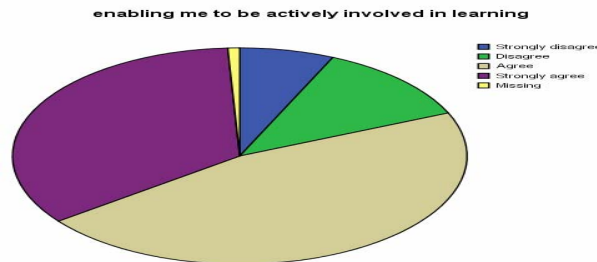
- **<u>Enabling me to be actively involved in learning</u>**

Figure 4.116   **Enabling me to be actively involved in learning (n=118)**

Figure 4.116 indicates the level of agreement on the statement that computer assisted instruction enabled them to be actively involved in learning; namely 8 (6.7%) strongly disagreed, 14 (11.8%) disagreed, 55 (46.2%) agreed, and 41 (34.5%) strongly agreed. There was 1 (0.8%) missing value. The median score was 3.0 (agree). A substantial majority of the respondents (80.7%) agreed or

strongly agreed. Respondents therefore generally benefited from active involvement during computer assisted instruction.
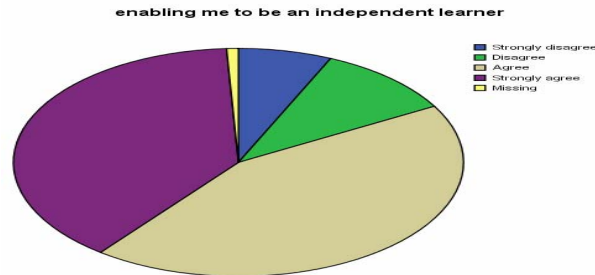
- **Enabling me to be an independent learner**

Figure 4.117   **Enabling me to be an independent learner (n=118)**

Figure 4.117 indicates the level of agreement on the statement that computer assisted instruction enabled them to be independent learners; namely 8 (6.7%) strongly disagreed, 12 (10.1%) disagreed, 52 (43.7%) agreed, and 46 (38.7%) strongly agreed. There was 1 (0.8%) missing value. The median score was 3.0 (agree). A substantial majority of the respondents (82.4%) agreed or strongly agreed. Respondents therefore generally benefited from independence during computer assisted instruction.

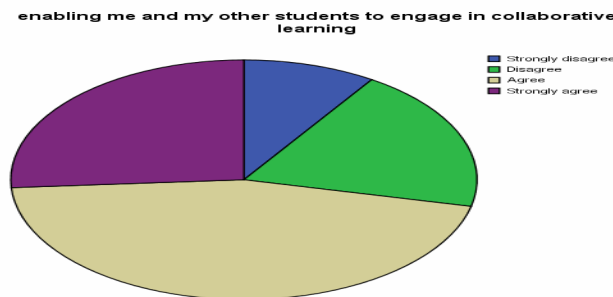- **Enabling me and other learners to engage in collaborative learning**

Figure 4.118   Enabling me and other learners to engage in collaborative learning (n=119)

Figure 4.118 indicates the level of agreement on the statement that computer assisted instruction enabled them and other learners to engage in collaborative learning; namely 11 (9.2%) strongly disagreed, 23 (19.3%) disagreed, 54 (45.4%) agreed, and 31 (26.1%) strongly agreed. The median score was 3.0 (agree). Although the majority of the respondents (71.5%) agreed or strongly agreed,

a substantial number (28.5%) disagreed or strongly disagreed. The majority of respondents therefore benefited from engaging in collaborative learning, but this benefit needs to be extended to all learners.

- **Enabling me to be up to date with the latest developments in the health sciences**
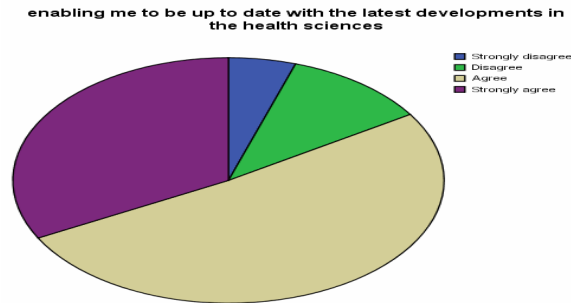

Figure 4.119   Enabling me to be up to date with the latest developments in the health sciences (n=119)

Figure 4.119 indicates the level of agreement on the statement that computer assisted instruction enabled them to date with the latest developments in the health sciences; namely 6 (5.0%) strongly disagreed, 13 (10.9%) disagreed, 61 (51.3%) agreed, and 39 (32.8%) strongly agreed. The median score was 3.0 (agree). A substantial majority of the respondents (84.1%) agreed or strongly agreed. Respondents therefore generally benefited from remaining up to date with the latest developments.
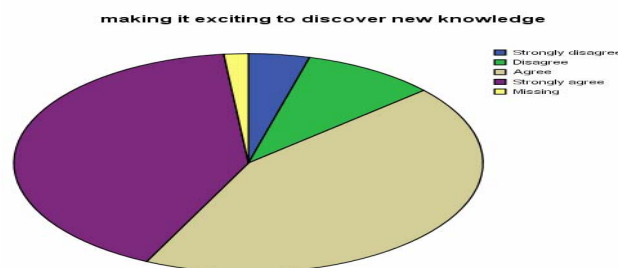
- **Making it exciting to discover new knowledge**

Figure 4.120   Making it exciting to discover new knowledge (n=117)

Figure 4.120 indicates the level of agreement on the statement that computer assisted instruction made it exciting to discover new knowledge; namely 5 (4.2%) strongly disagreed, 11 (9.2%) disagreed, 52 (43.7%) agreed, and 49 (41.2%) strongly agreed. There were 2 (1.7%) missing values.

The median score was 3.0 (agree). A substantial majority of the respondents (84.9%) agreed or strongly agreed. Respondents therefore generally benefited from excitement associated with discovering new knowledge.

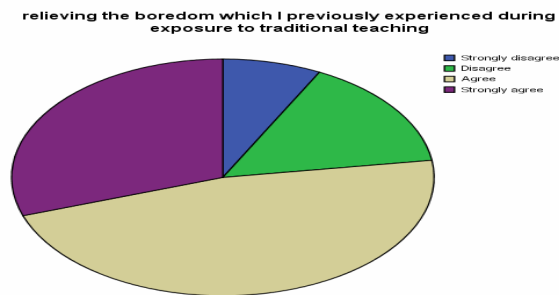- **Relieving the boredom which I previously experienced during exposure to traditional teaching**

Figure 4.121   Relieving the boredom which I previously experienced during exposure to traditional teaching (n=119)

Figure 4.121 indicates the level of agreement on the statement that that computer assisted instruction relieved the boredom, which they previously experienced during exposure to traditional teaching; namely 9 (7.6%) strongly disagreed, 18 (15.1%) disagreed, 56 (47.1%) agreed, and 36 (30.3%) strongly agreed. The median score was 3.0 (agree). A substantial majority of the respondents (77.4%) agreed or strongly agreed. The respondents therefore generally benefited from decreased boredom.

- **Providing extended interaction with other students through electronic communication**
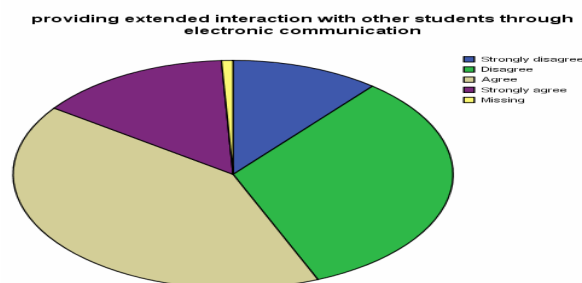

Figure 4.122   Providing extended interaction with other learners through electronic communication (n=118)

Figure 4.122 indicates the level of agreement on the statement that computer assisted instruction provided extended interaction with other learners through electronic communication; namely 13 (10.9%) strongly disagreed, 39 (32.8%) disagreed, 49 (41.2%) agreed, and 17(14.3%) strongly agreed. There was 1 (0.8%) missing value. The median score was 3.0 (agree). Although the majority of the respondents agreed or strongly agreed (55.5%), a slight minority (43.5%) disagreed or strongly disagreed. The respondents therefore did not adequately benefit from extended communication with peers.

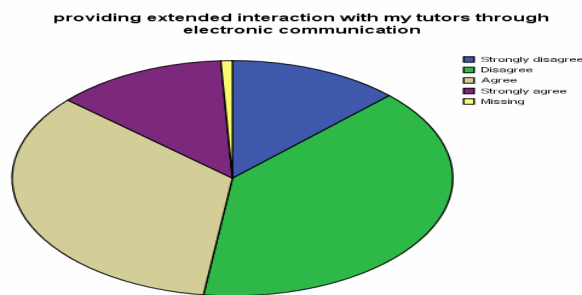- **Providing extended interaction with my tutors through electronic communication**

Figure 4.123   Providing   extended   interaction   with   my   tutors   through   electronic communication (n=118)

Figure 4.123 indicates the level of agreement on the statement that computer assisted instruction provided extended interaction with their tutors through electronic communication; namely 15 (12.6%) strongly disagreed, 47 (39.5%) disagreed, 41 (34.5%) agreed, and 15 (12.6%) strongly agreed. There was 1 (0.8%) missing value. The median score was 2.0 (disagree). The majority of the respondents (52.1%) disagreed or strongly disagreed, while a slight minority (47.1%), agreed or strongly agreed. The respondents therefore generally benefited inadequately from electronic communication with their tutors.

- **Providing extended interaction with field experts through electronic communication**
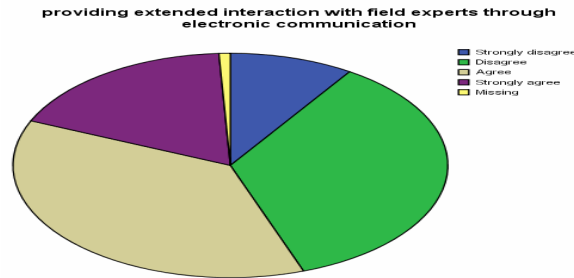

Figure 4.124   Providing   extended   interaction   with   field   experts   through   electronic communication (n=118)

Figure 4.124 indicates the level of agreement on the statement that computer assisted instruction provided extended interaction with field experts through electronic communication; namely 11 (9.2.%) strongly disagreed, 42 (35.3%) disagreed, 44 (37.0%) agreed, and 21 (17.6%) strongly agreed. There was 1 (0.8%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (54.6%) agreed or strongly agreed, a slight minority (44.5%) disagreed or strongly disagreed. The respondents therefore generally benefited inadequately from extended communication with field experts, and this benefit needs to be extended to all learners.

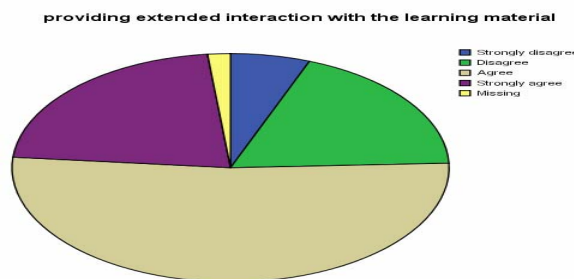- **Providing extended interaction with the learning material**

Figure 4.125   Providing extended interaction with the learning material (n=117)

Figure 4.125 indicates the level of agreement on the statement that computer assisted instruction provided extended interaction with the learning material; namely 7 (5.9%) strongly disagreed, 22 (18.5%) disagreed, 62 (52.1%) agreed, and 26 (21.8%) strongly agreed. There were 2 (1.7%) missing values. The median score was 3.0 (agree). The majority of the respondents (73.9%) agreed

or strongly agreed. Respondents therefore generally benefited from extended interaction with the learning material.
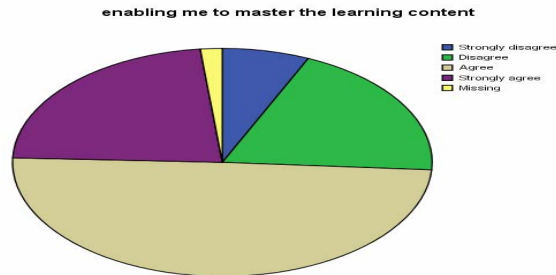
- **Enabling me to master the learning content**

Figure 4.126   Enabling me to master the learning content (n=117)

Figure 4.126 indicates the level of agreement on the statement that computer assisted instruction enabled them to master the learning content; namely 8 (6.7%) strongly disagreed, 23 (19.3%) disagreed, 59 (49.6%) agreed and 27 (22.7%) strongly agreed. There were 2 (1.7%) missing values. The median score was 3.0 (agree). Although the majority of the respondents (72.3%) agreed or strongly agreed, a reasonable number (26.0%) disagreed or strongly disagreed. The majority of respondents therefore benefited from mastering the learning content, but this benefit needs to be extended to all learners.

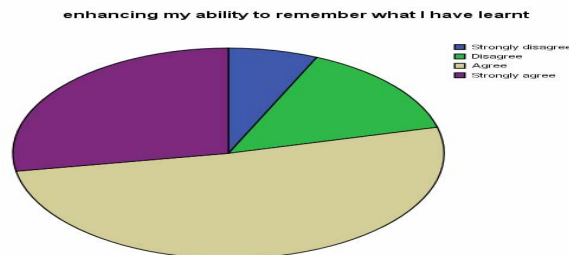- **Enhancing my ability to remember what I have learnt**

Figure 4.127   Enhancing my ability to remember what I have learnt (n=119)

Figure 4.127 indicates the level of agreement on the statement that computer assisted instruction enhanced their ability to remember what they have learnt; namely 8 (8.7%) strongly disagreed, 17 (14.3%) disagreed, 61 (51.3%) agreed, and 33 (27.7%) strongly agreed. The median score was 3.0

(agree). A substantial majority of the respondents (79.0%) agreed or strongly agreed. Respondents therefore generally benefited from increased learning retention.

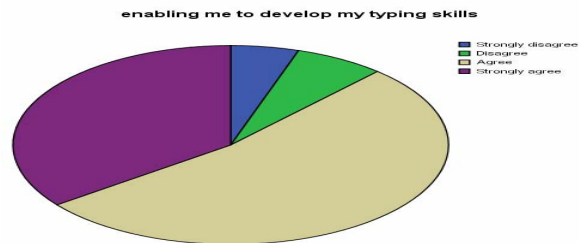- **Enabling me to develop my typing skills**

Figure 4.128   Enabling me to develop my typing skills (n=119)

Figure 4.128 indicates the level of agreement on the statement that computer assisted instruction enabled them to develop their typing skills; namely 6 (5.0%) strongly disagreed, 8 (6.7%) disagreed, 63 (52.9%) agreed, and 42 (35.3%) strongly agreed. The median score was 3.0 (agree). A substantial majority of the respondents (88.2%) agreed or strongly agreed. Respondents therefore generally benefited from increased typing skills.
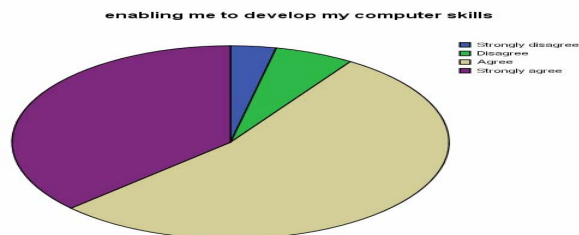
- **Enabling me to develop my computer skills**

Figure 4.129   Enabling me to develop my computer skills (n=119)

Figure 4.129 indicates the level of agreement on the statement that computer assisted instruction enabled them to develop their computer skills; namely 4 (3.4%) strongly disagreed, 7 (5.9%) disagreed, 64 (53.8%) agreed, and 44 (37.0%) strongly agreed. The median score was 3.0 (agree). A substantial majority of the respondents (90.8%) agreed or strongly agreed. The respondents therefore generally benefited from increased computer skills.
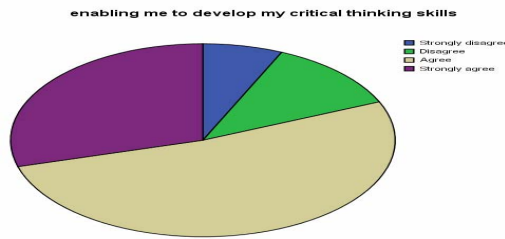
- **<u>Enabling me to develop my critical thinking skills</u>**

Figure 4.130   Enabling me to develop my critical thinking skills (n=119)

Figure 4.130 indicates the level of agreement on the statement that computer assisted instruction, enabled them to develop their critical thinking skills; namely, 8 (6.7%) strongly disagreed, 14 (11.8%) disagreed, 62 (52.1%) agreed, and 35 (29.4%) strongly agreed. The median score was 3.0 (agree). A substantial majority of the respondents (81.5%) agreed or strongly agreed. Respondents therefore generally benefited from increased critical thinking skills.
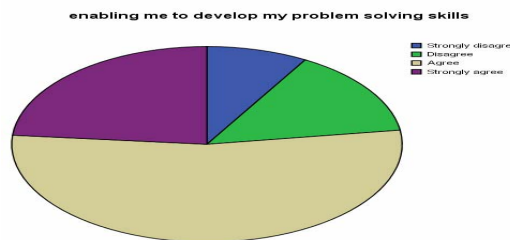
- **<u>Enabling me to develop my problem-solving skills</u>**

Figure 4.131   Enabling me to develop my problem–solving skills (n=119)

Figure 4.131 indicates the level of agreement on the statement that computer assisted instruction, enabled them to develop their problem-solving skills; namely 10 (8.4%) strongly disagreed, 17 (14.3%) disagreed, 64 (53.8%) agreed, and 28 (23.5%) strongly agreed. The median score was 3.0 (agree). A substantial majority of the respondents (77.3%) agreed or strongly agreed. The respondents therefore generally benefited from increased problem-solving skills.
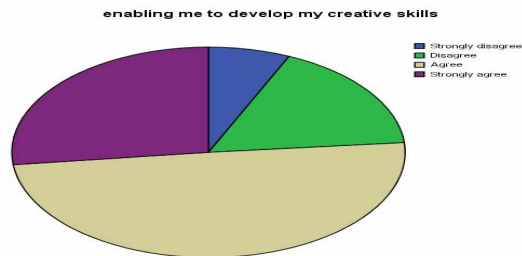
- **Enabling me to develop my creative skills**

Figure 4.132   Enabling me to develop my creative skills (n=119)

Figure 4.132 indicates the level of agreement on the statement that computer assisted instruction enabled them to develop their creative skills; namely 8 (6.7%) strongly disagreed, 20 (16.8%) disagreed, 59 (49.6%) agreed, and 32 (26.9%) strongly agreed. The median score was 3.0 (agree). A substantial majority of the respondents (76.5%) agreed or strongly agreed. Respondents therefore generally benefited from increased creative skills.

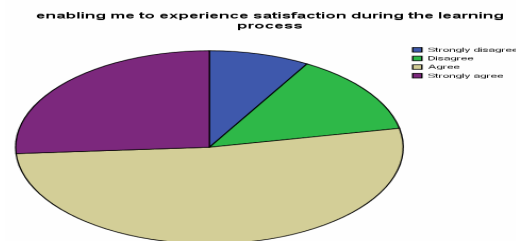- **Enabling me to experience satisfaction during the learning process**

Figure 4.133   Enabling me to experience satisfaction during the learning process (n=119)

Figure 4.133 indicates the level of agreement on the statement that computer assisted instruction enabled them to experience satisfaction during the learning process; namely 10 (8.4%) strongly disagreed, 16 (13.4%) disagreed, 62 (52.1%) agreed, and 31 (26.1%) strongly agreed. The median score was 3.0 (agree). A substantial majority of the respondents (78.2%) agreed or strongly agreed. Most respondents therefore generally benefited from experiences of satisfaction during the learning process.
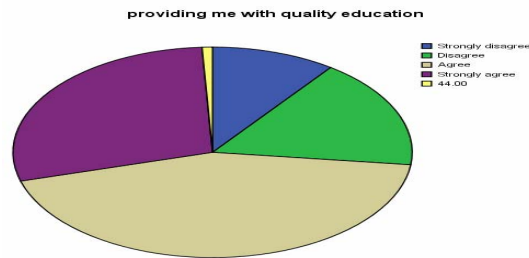
• **Providing me with quality education**

Figure 4.134 Providing me with quality education (n=119)

Figure 4.134 indicates the level of agreement on the statement that computer assisted instruction provided them with quality education; namely 12 (10.1%) strongly disagreed, 20 (16.8%) disagreed, 52 (43.7%) agreed and 34 (28.6%) strongly agreed. There was 1 (0.8%) missing value. The median score was 3.0 (agree). Although the majority of the respondents (72.3%) agreed or strongly agreed, a reasonable number (26.9%) disagreed or strongly disagreed. Most respondents therefore benefited from quality education, but this benefit needs to be extended to all learners.

4.2.4.3 Comparison between the responses of second and third year respondents

The Mann-Whitney U-test indicated that there were no significant differences between the second and third year respondents' responses on the following items:

- enhancing my motivation to learn (p=0.954)
- giving me a sense of being in control of my own learning (p=0.751)
- enabling me to select the time for my study (p=0.880)
- enabling me to establish my own pace of learning (p=0.186)
- enabling me to repeatedly study sections of the learning material until I gain understanding (p=0.971)
- giving me the freedom to make mistakes and learn from it (p=0.284)
- decreasing pressure placed on me by other learners (p=0.386)
- decreasing pressure placed on me by my tutors (p=0.914)
- enabling me to achieve my learning objectives through reading skills computer packages (p=0.985)

- enabling me to achieve my learning objectives through typing skills computer packages (p=0.382)
- enabling me to achieve my learning objectives when through computer literacy packages (p=0.522)
- enabling me to achieve my learning objectives through text-based course content computer packages (p=0.446)
- enabling me to achieve my learning objectives through multimedia course content computer packages (p=0.643)
- enabling me to achieve my learning objectives through text-based computer packages which provide scenarios that develop my problem-solving skills (p=0.879)
- enabling me to achieve my learning objectives through multimedia computer packages which provide scenarios that develop my problem-solving skills (p=0.734)
- enabling me to achieve my learning objectives through computer packages simulating clinical situations which develop my decision-making skills (p=0.963)
- enabling me to achieve my learning objectives through computer-gaming packages (p=0.692)
- enabling me to achieve my learning objectives by using the Internet to obtain information (p=0.073)
- enabling me to obtain information (p=0.633)
- enabling me to store information(p=0.966)
- enabling me to retrieve stored information (p=0.780)
- enabling me to be actively involved in learning (p=0.926)
- enabling me to be an independent learner (p=0.468)
- enabling me and my other students to engage in collaborative learning (p=0.181)
- enabling me to be up to date with the latest developments in the health sciences (p=0.0.134)
- making it exciting to discover new knowledge (p=0.365)
- relieving the boredom which I previously experienced during exposure to traditional teaching (p=892)
- providing extended interaction with other students through electronic communication (p=0.761)
- providing extended interaction with my tutors through electronic communication (p=0.407)

- providing extended interaction with field experts through electronic communication (p=0.405)
- providing extended interaction with the learning material (p=0.167)
- enabling me to master the learning content (p=0.422)
- enhancing my ability to remember what I have learnt (p=0.538)
- enabling me to develop my typing skills (p=0.750)
- enabling me to develop my computer skills (p=0.840)
- enabling me to develop my critical thinking skills (p=0.946)
- enabling me to develop my problem–solving skills(p=0.135)
- enabling me to develop my creative skills (0.598)
- enabling me to experience satisfaction during the learning process (p=0.769)
- providing me with quality education (p=0.342)

The Mann-Whitney U-test indicated that there was a significant difference between the second and third year respondents' responses on the following item:

- enabling me to discontinue learning when my concentration wavers (p=0.030).The second year respondents (mean=2.77) were significantly more inclined to agree than the third year respondents (mean=2.53), that computer assisted instruction enabled them to discontinue learning when their concentration wavers.

4.2.5   Problems experienced by the respondents with computer assisted instruction

Section E of the questionnaire comprised 30 items pertaining to the problems the respondents experienced with computer assisted instruction. The researcher discussed the results of both second and third year respondents starting with the second year responses.

4.2.5.1 Second year respondents

The research findings pertaining to the second year respondents are presented in the following section. The colour codes for the responses in the pie diagrams are as follows:

Strongly agree;   *Agree;*   *Disagree;*   *Strongly disagree;*   *Missing value*

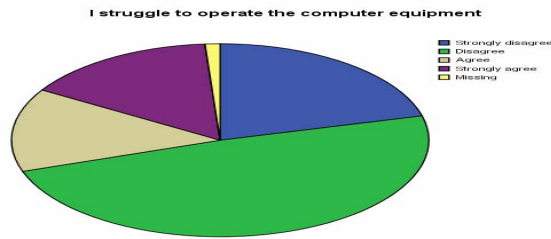- **I struggle to operate the computer equipment**

Figure 4.135 I struggle to operate the computer equipment (n=170)

Figure 4.135 indicates the level of agreement on the statement that that they struggle to operate the computer equipment; namely 36 (20.9%) strongly disagreed, 84 (48.5%) disagreed, 24 (14.0%) agreed, and 26 (15.1%) strongly agreed. There were 2 (1.2%) missing values. The median score was 2.0 (disagree). Although the majority of the respondents (69.4%) disagreed or strongly disagreed, a reasonable number (29.1%) agreed or strongly agreed. Most respondents therefore appear not to struggle to operate the computer equipment, but a reasonable number needs assistance in learning to operate the equipment.

- **I struggle to operate the computer software (packages) functions**
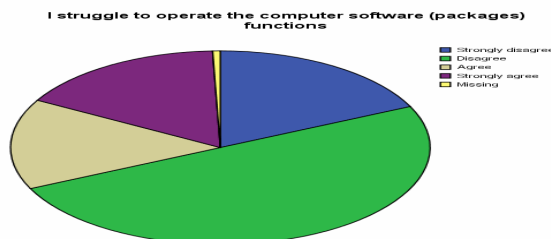

Figure 4.136 I struggle to operate the computer software (packages) functions (n=171)

Figure 4.136 indicates the level of agreement on the statement that they struggle to operate the computer software (packages) functions; namely 31 (18.0%) strongly disagreed, 86 (50.0%) disagreed, 26 (15.1%) agreed, and 28 (16.3%) strongly agreed. There was 1 (0.6%) missing value. The median score was 2.0 (disagree). Although the majority of the respondents (68.0%) disagreed or strongly disagreed, a substantial number (31.4%) agreed or strongly agreed. Most respondents therefore appeared not to struggle to operate the computer software functions, but a reasonable number needed assistance in learning to operate these functions.

- **I struggle to remain up-to-date with developments in computer technology**
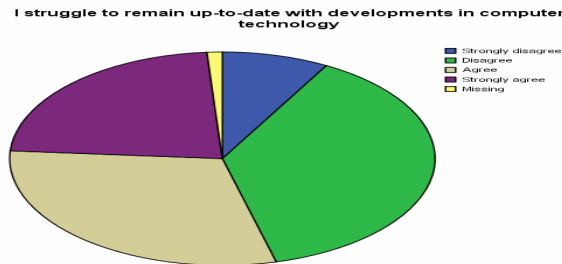

Figure 4.137   I struggle to remain up-to-date with developments in computer technology (n=170)

Figure 4.137 indicates the level of agreement on the statement that they struggle to remain up-to-date with developments in computer technology; namely 14 (8.1%) strongly disagreed, 65 (37.8%) disagreed, 52 (30.2%) agreed, and 39 (22.7%) strongly agreed. There were 2 (1.2%) missing values. The median score was 3.0 (agree). A slight majority of the respondents (52.9%) agreed or strongly agreed, and (45.9%) disagreed or strongly disagreed. Helping respondents to remain up-to-date with developments in computer technology therefore requires priority attention.
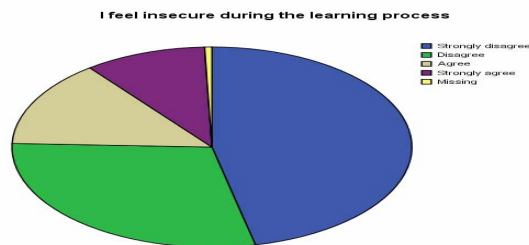
- **I feel insecure during the learning process**

Figure 4.138   I feel insecure during the learning process (n=171)

Figure 4.138 indicates the level of agreement on the statement that they feel insecure during the learning process; namely 80 (46.5%) strongly disagreed, 50 (29.1%) disagreed, 24 (14.0%) agreed, and 17 (9.9%) strongly agreed. There was 1 (0.6%) missing value. The median score was 2.0 (strongly disagree). A substantial majority of the respondents (75.6%) disagreed or strongly disagreed. The respondents therefore generally felt secure during the learning process.

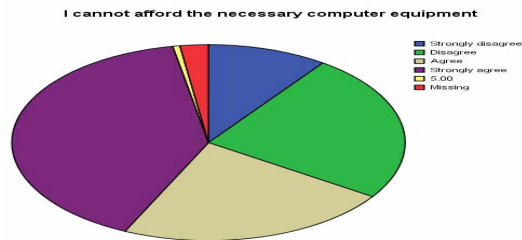- **I cannot afford the necessary computer equipment**

Figure 4.139   I cannot afford the necessary computer equipment (n=168)

Figure 4.139 indicates the level of agreement on the statement that they cannot afford the necessary computer equipment; namely 17 (9.9%) strongly disagreed, 42 (24.4%) disagreed, 39 (22.7%) agreed, and 69 (40.1%) strongly agreed. There were 4 (2.3%) missing values. The median score was 3.0 (strongly agree). The majority of the respondents (62.8%) agreed or strongly agreed, and a substantial number (34.3%) disagreed or strongly disagreed. While some respondents appeared to be able to afford the necessary computer equipment, most were unable to do so. Such a state of affairs may lead to inequity with regard to respondents' ability to engage in computer assisted instruction activities at home.

- **A lack of computer facilities hamper my access to computer assisted instruction**

Figure 4.140   A lack of computer facilities hamper my access to computer assisted instruction (n=169)

Figure 4.140 indicates the level of agreement on the statement that a lack of computer facilities hamper their access to computer assisted instruction; namely 12 (7.0%) strongly disagreed, 42 (24.4%) disagreed, 43 (25.0%) agreed, and 72 (41.9%) strongly agreed. There were 3 (1.7%) missing values. The median score was 3.0 (strongly agree). The majority of the respondents (66.9%) agreed or strongly agreed, and a substantial number (31.4%) disagreed or strongly disagreed. While

some respondents appeared to have had adequate access to computer facilities, most did not have this access. Such a state of affairs may lead to inequity with regard to respondents' ability to engage in computer assisted instruction activities.
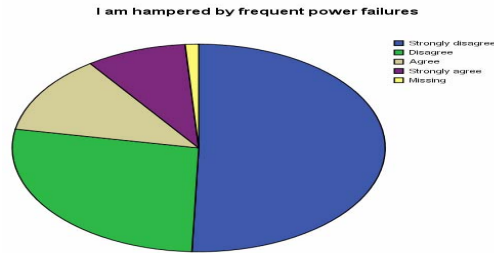
- **<u>I am hampered by frequent power failures</u>**

Figure 4.141   I am hampered by frequent power failures (n=170)

Figure 4.141 indicates the level of agreement on the statement that that they are hampered by frequent power failures; namely 87 (50.6%) strongly disagreed, 47 (27.3%) disagreed, 21 (12.2%) agreed, and 15 (8.7%) strongly agreed. There were 2 (1.2%) missing values. The median score was 1.0 (strongly disagree). A substantial majority of the respondents (77.9%) disagreed or strongly disagreed. Frequent power failures therefore do not appear to be of major concern.

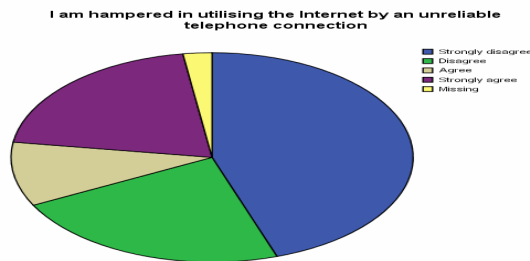- **<u>I am hampered in utilising the Internet due to unreliable telephone connection</u>**

Figure 4.142   I am hampered in utilising the Internet due to an unreliable telephone connection (n=168)

Figure 4.142 indicates the level of agreement on the statement that they are hampered in utilising the Internet due to unreliable telephone connections; namely 77 (44.8%) strongly disagreed, 39 (22.7%) disagreed, 17 (9.9%) agreed, and 35 (20.3%) strongly agreed. There were 4 (2.3%) missing values. The median score was 2.0. (strongly disagree). The majority of the respondents (67.5%)

disagreed or strongly disagreed, while a substantial number (30.2%) agreed or strongly agreed. Although the majority of the respondents were not hampered by unreliable telephone connections, it appeared to be problematic for many of the respondents.

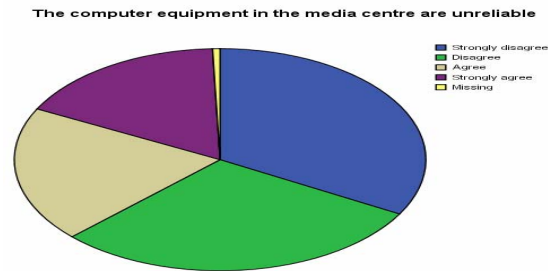- **The computer equipments in the media centre are unreliable**

Figure 4.143   The computer equipments in the media centre are unreliable (n=171)

Figure 4.143 indicates the level of agreement on the statement that the computer equipment in the media centres is unreliable; namely 57 (33.1%) strongly disagreed, 51 (29.7%) disagreed, 34 (19.8%) agreed, and 29 (16.9%) strongly agreed. There was 1 (0.6%) missing value. The median score was 2.0 (strongly disagree). The majority of the respondents disagreed or strongly disagreed (62.8%), while a substantial number (36.7%) agreed or strongly agreed. Although the majority of respondents were not hampered by unreliable computer equipment in the media centre, it appeared to be problematic for many respondents.

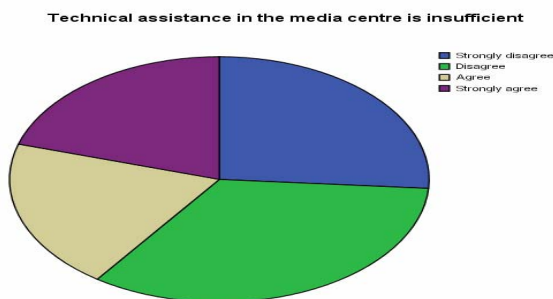- **Technical assistance in the media centre is insufficient**

Figure 4.144   Technical assistance in the media centre is insufficient   (n=172)

Figure 4.144 indicates the level of agreement on the statement that technical assistance in the media centre is insufficient; namely 45 (26.2%) strongly disagreed, 58 (34.0%) disagreed, 34 (20%)

agreed, and 35 (20.3%) strongly agreed. The median score was 2.0 (disagree). The majority of the respondents (60.2%) disagreed or strongly disagreed, while a substantial number (40.3%) agreed or strongly agreed. Insufficient technical assistance in the media centre appeared to be problematic for many respondents.

- **A learning facilitator is not available when I need assistance**
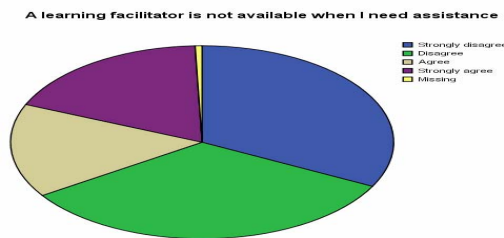

Figure 4.145   A learning facilitator is not available when I need assistance (n=171)

Figure 4.145 indicates the level of agreement on the statement that a learning facilitator is not available when they need assistance; namely 56 (33%) strongly disagreed, 57 (33.1%) disagreed, 27 (16.0%) agreed, and 31 (18.0%) strongly agreed. The median score was 2.0 (disagree). There was 1 (0.6%) missing value. The majority of the respondents (66.4%) disagreed or strongly disagreed, while a substantial number (34.0%) agreed or strongly agreed. Although the majority of respondents were not hampered by the unavailability of a learning facilitator, it appeared to be problematic for many respondents.

- **The learning facilitator is not proficient in computer assisted instruction**
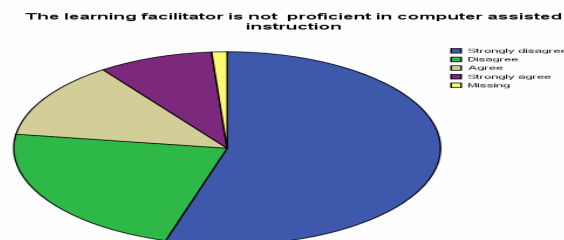

Figure 4.146   The learning facilitator is not proficient in computer assisted instruction (n=170)

Figure 4.146 indicates the level of agreement on the statement that the learning facilitator is not proficient in computer assisted instruction; namely 94 (54.7%) strongly disagreed, 39 (22.7%)

disagreed, 22 (12.8%) agreed, and 15 (8.7%) strongly agreed. There were 2 (1.2%) missing values. The median score was 1.0 (strongly disagree). A substantial majority of the respondents (77.4%) disagreed or strongly disagreed. The respondents are therefore generally satisfied with the proficiency of the learning facilitator.

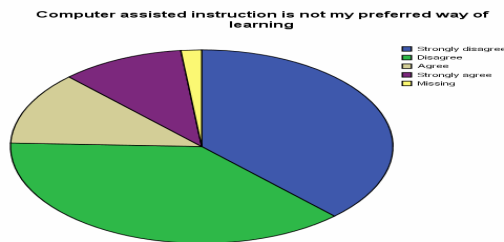- **<u>Computer- assisted instruction is not my preferred way of learning</u>**

Figure 4.147 Computer assisted instructions is not my preferred way of learning (n=169)

Figure 4.147 indicates the level of agreement on the statement that computer assisted instruction is not their preferred way of learning; namely 65 (37.8%) strongly disagreed, 65 (37.8%) disagreed, 21 (12.2%) agreed, and 18 (10.5%) strongly agreed. There were 3 (1.7%) missing values. The median score was 2.0 (strongly disagree). A substantial majority of the respondents (75.6%) disagreed or strongly disagreed. Computer assisted instruction was therefore a preferred way of learning for most respondents.

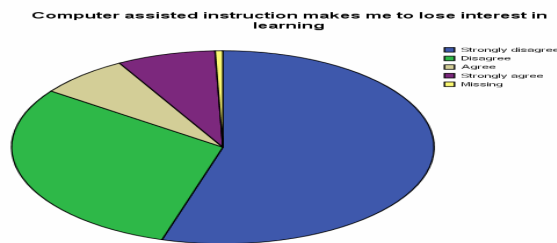- **<u>Computer- assisted instruction makes me to lose interest in learning</u>**

Figure 4.148   Computer assisted instruction makes me to lose interest in learning (n=171)

Figure 4.148 indicates the level of agreement on the statement that computer assisted instruction made them to lose interest in learning; namely 94 (54.7%) strongly disagreed, 52 (30.2%) disagreed, 12 (7.0%) agreed, and 13 (7.6%) strongly agreed. There was 1 (0.6%) missing value. The median score was 1.0 (strongly disagree). A substantial majority of the respondents (74.9%) disagreed or

strongly disagreed. Computer assisted instructions therefore generally promoted respondents' interest in their learning.
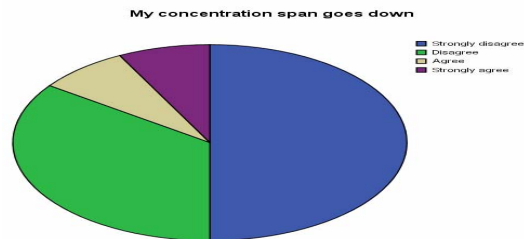
- **My concentration span goes down**

Figure 4.149 My concentration span goes down (n=172)

Figure 4.149 indicates the level of agreement on the statement that computer assisted instruction results in decreased levels of concentration; namely 86 (50.0%) strongly disagreed, 60 (34.9%) disagreed, 13 (7.6%) agreed, and 13 (7.6%) strongly agreed. The median score was 1.5 (strongly disagree). A substantial majority of the respondents (84.9%) disagreed or strongly disagreed. Computer assisted instruction therefore generally promoted respondents' concentration.

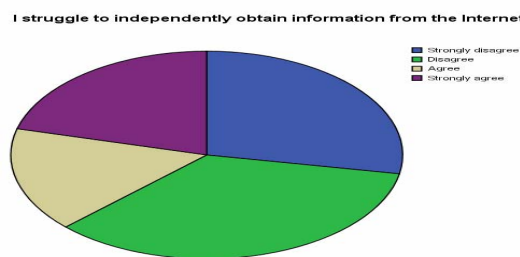- **I struggle to independently obtain information from the Internet**

Figure 4.150 I struggle to independently obtain information from the Internet (n=172)

Figure 4.150 indicates the level of agreement on the statement that they struggle to independently obtain information from the Internet; namely 48 (27.9%) strongly disagreed, 60 (34.9%) disagreed, 28 (16.3%) agreed, and 36 (20.9%) strongly agreed. The median score was 2.0 (disagree). The majority of the respondents (62.8%) disagreed or strongly disagreed, while a substantial number (37.2%) agreed or strongly agreed. Although the majority of respondents did not struggle to independently obtain information from the Internet, it appeared to be problematic for many respondents.

- **I struggle to achieve my learning objectives through reading skills computer packages**
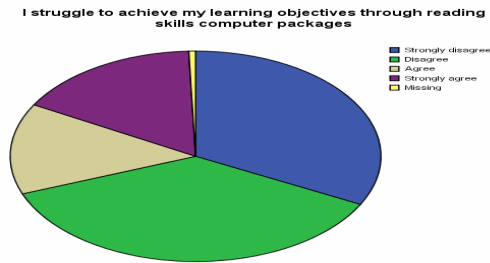

Figure 4.151   I struggle to achieve my learning objectives through reading skills computer packages (n=171)

Figure 4.151 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through reading skills computer packages; namely 56 (32.6%) strongly disagreed, 63 (36.6%) disagreed, 24 (14.0%) agreed, and 28 (16.3%) strongly agreed. There was 1 (0.6%) missing value. The median score was 2.0 (disagree). The majority of the respondents (69.2%) disagreed or strongly disagreed, while a substantial number (30.3%) agreed or strongly agreed. Although the majority of respondents did not struggle to achieve their learning objectives through reading skills computer packages, it appeared to be problematic for many respondents.

- **I struggle to achieve my learning objectives through typing skills computer packages**
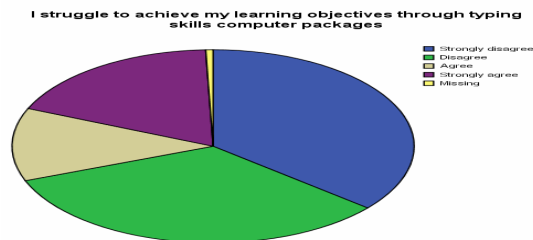

Figure 4.152   I struggle to achieve my learning objectives through typing skills computer packages (n=171)

Figure 4.152 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through typing skills computer packages; namely 62 (36.0%) strongly disagreed, 57 (33.1%) disagreed, 21 (12.2%) agreed, and 31 (18.0%) strongly agreed. There was 1 (0.6%) missing value. The median score was 2.0 (strongly disagree). The majority of the respondents (69.1%) disagreed or strongly disagreed, while a substantial number (30.2%) agreed or strongly

agreed. Although the majority of respondents did not struggle to achieve their learning objectives through typing skills computer packages, it appeared to be problematic for many respondents.

- **I struggle to achieve my learning objectives computer literacy packages**

Figure 4.153 I struggle to achieve my learning objectives through computer literacy packages (n=172)

Figure 4.153 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through computer literacy packages; namely 43 (25.0%) strongly disagreed, 76 (44.2%) disagreed, 22 (12.8%) agreed, and 31 (18.0%) strongly agreed. The median score was 2.0 (disagree). The majority of the respondents (69.2%) disagreed or strongly disagreed, while a substantial number (30.8%) agreed or strongly agreed. Although the majority of respondents did not struggle to achieve their learning objectives through computer literacy packages, it appeared to be problematic for many respondents.

- **I struggle to achieve my learning objectives through text-based course content computer packages**
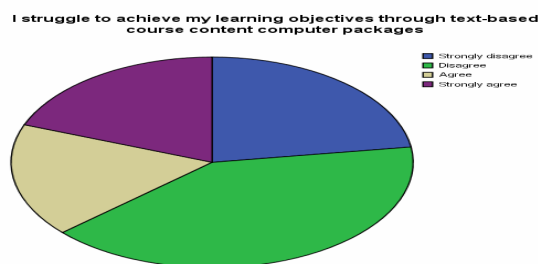

Figure 4.154 I struggle to achieve my learning objectives through text-based course content computer packages (n=172)

Figure 4.154 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through text-based course content computer packages; namely 39 (22.7%) strongly disagreed, 70 (40.7%) disagreed, 30 (17.4%) agreed, and 33 (19.2%) strongly agreed. The median score was 2.0 (disagree). The majority of the respondents (63.4%) disagreed or strongly disagreed, while a substantial number (36.6%) agreed or strongly agreed. Although the majority of respondents did not struggle to achieve their learning objectives through text-based course content computer packages, it appeared to be problematic for many respondents.

- **I struggle to achieve my learning objectives through multimedia course content computer packages**
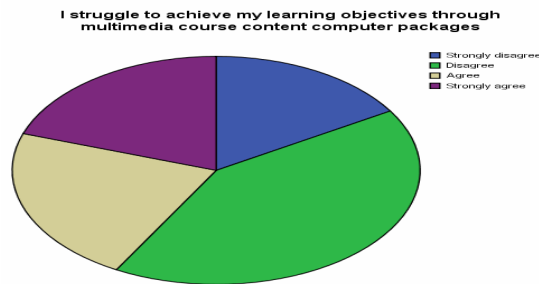

Figure 4.155   I struggle to achieve my learning objectives through multimedia course content computer packages (n=172)

Figure 4.155 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through multimedia course content computer packages; namely 28 (16.3%) strongly disagreed, 72 (41.9%) disagreed, 38 (22.1%) agreed, and 34 (19.8%) strongly agreed. The median score was 2.0 (disagree). A slight majority of the respondents (58.2%) disagreed or strongly disagreed, while a substantial number (41.9%) agreed or strongly agreed. Helping respondents to achieve their learning objectives through multimedia course content computer packages requires priority attention.

- **I struggle to achieve my learning objectives through text-based computer packages, which provide scenarios that develop my problem-solving skills**
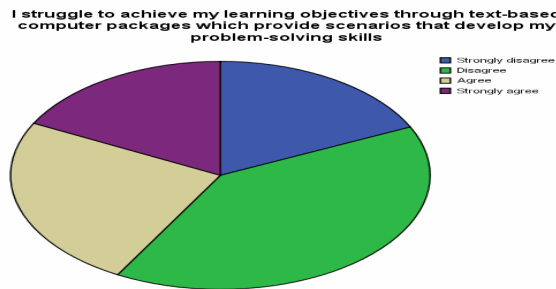

Figure 4.156   I struggle to achieve my learning objectives through text-based computer packages, which provide scenarios that develop my problem-solving skills (n=172)

Figure 4.156 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through text-based computer packages which provide scenarios that develop their problem-solving skills; namely 31 (18.0%) strongly disagreed, 69 (40.1%) disagreed, 42 (24.4%) agreed, and 30 (17.4%) strongly agreed. The median score was 2.0 (disagree). A slight majority of the respondents (58.1%) disagreed or strongly disagreed, while a substantial number (41.8%) agreed or strongly agreed. Helping respondents to achieve their learning objectives through text-based computer packages that provide scenarios that develop their problem-solving skills, requires priority attention.

- **I struggle to achieve my learning objectives through multimedia computer packages that provide scenarios that develop my problem-solving skills**
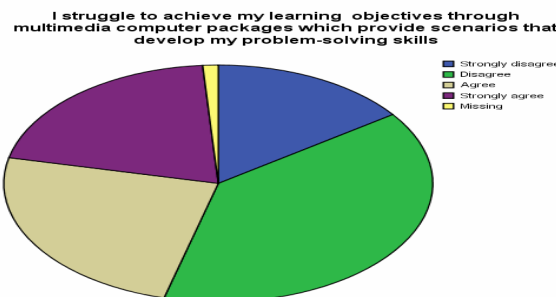

Figure 4.157 I struggle to achieve my learning objectives through multimedia computer packages that provide scenarios that develop my problem-solving skills (n=170)

Figure 4.157 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through multimedia computer packages, which provide scenarios that develop their problem-solving skills; namely 26 (15.1%) strongly disagreed, 67 (39.0%) disagreed, 42 (24.4%) agreed, and 35 (20.3%) strongly agreed. There were 2 (1.2%) missing values. The median score was 2.0 (disagree). A slight majority of the respondents (54.1%) disagreed or strongly disagreed, while a substantial number (44.7%) agreed or strongly agreed. Helping respondents to achieve their learning objectives through multimedia computer packages that provide scenarios that develop their problem-solving skills, requires priority attention.

- **I struggle to achieve my learning objectives through computer packages simulating clinical situations, which develop my decision-making skills**

Figure 4.158 I struggle to achieve my learning objectives through computer packages simulating clinical situations that develop my decision-making skills (n=171)

Figure 4.158 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through computer packages simulating clinical situations which develop their decision-making skills; namely 32 (18.6%) strongly disagreed, 67 (39.0%) disagreed, 39 (22.7%) agreed, and 33 (19.2%) strongly agreed. There was 1 (0.6%) missing value. The median score was 2.0 (disagree). A slight majority of the respondents (57.6%) disagreed or strongly disagreed, while a substantial number (41.9%) agreed or strongly agreed. Helping respondents to achieve their learning objectives through multimedia computer packages simulating clinical situations that develop their decision-making skills, requires priority attention.

- **I struggle to achieve my learning objectives through computer-gaming packages**
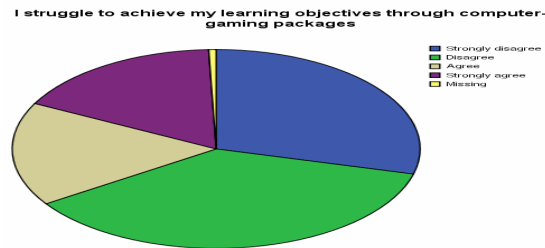

Figure 4.159   I struggle to achieve my learning objectives through computer gaming packages (n=171).

Figure 4.159 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through computer gaming packages; namely 50 (29.1%) strongly disagreed, 67 (37.0%) disagreed, 29 (16.9%) agreed, and 29 (16.9%) strongly agreed. There was 1 (0.6%) missing value. The median score was 2.0. (disagreed). The majority of the respondents (66.1%) disagreed or strongly disagreed, while a substantial number (33.8%) agreed or strongly agreed. Although the majority of respondents did not struggle to achieve their learning objectives through computer gaming packages, it appears to be problematic for many respondents.

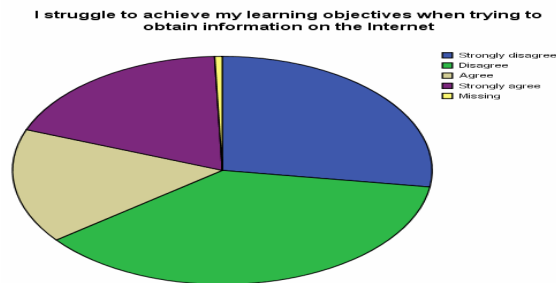- **I struggle to achieve my learning objectives when trying to obtain information on the Internet**

Figure 4.160   I struggle to achieve my learning objectives when trying to obtain information on the Internet (n=171)

Figure 4.160 indicates the level of agreement on the statement that they struggle to achieve their learning objectives when trying to obtain information on the Internet; namely 47 (27.3%) strongly disagreed, 64 (37.2%) disagreed, 28 (16.3%) agreed, and 32 (18.6%) strongly agreed. There was 1 (0.6%) missing value. The median score was 2.0 (disagree). The majority of the respondents

(64.5%) disagreed or strongly disagreed, while a substantial number (34.9%) agreed or strongly agreed. Although the majority of respondents did not struggle to obtain information from the Internet, it appeared to be problematic for many respondents.

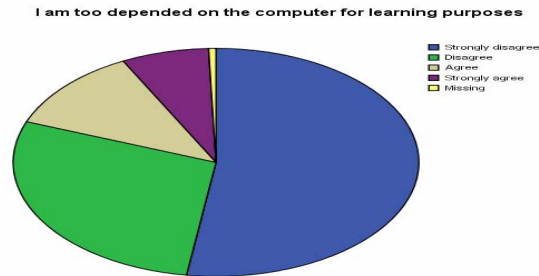- **I am too dependent on the computer for learning purposes**

Figure 4.161   I m too dependent on the computer for learning purposes (n=171)

Figure 4.161 indicates the level of agreement on the statement that they are too dependent on the computer for learning purposes; namely 90 (52.3%) strongly disagreed, 49 (28.5%) disagreed, 20 (11.6%) agreed, and 12 (7.0%) strongly agreed. There was 1 (0.6%) missing value. The median score was 1.0 (strongly disagree). A substantial majority of the respondents (80.8%) disagreed or strongly disagreed. The respondents were therefore generally not too dependent on the computer for learning purposes.

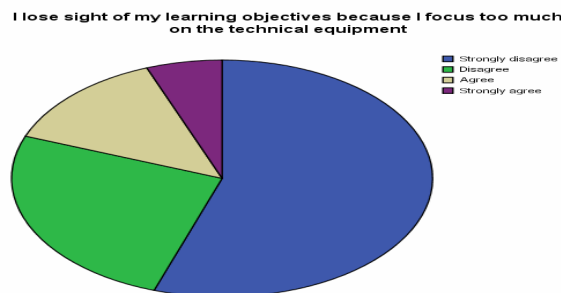- **I loose sight of my learning objectives because I focus too much on the technical equipment**

Figure 4.162   I loose sight of my learning objectives because I focus too much on the technical equipment (n=172)

Figure 4.162 indicates the level of agreement on the statement that they loose sight of their learning objectives because they focus too much on the technical equipment; namely 95 (55.2%) strongly disagreed, 44 (25.6%) disagreed, 23 (13.4%) agreed, and 10 (5.8%) strongly agreed. The median score was 1.0. (strongly disagree). A substantial majority of the respondents (80.8%) disagreed or strongly disagreed. The respondents therefore generally did not loose sight of their learning objectives because they focused too much on the technical equipment.

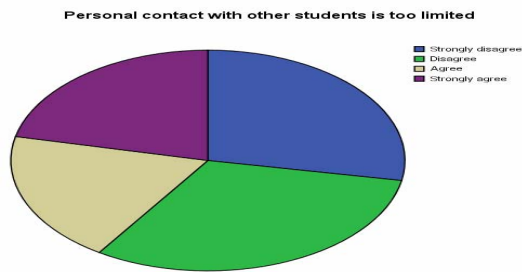- **Personal contact with other learners is too limited**

Figure 4.163   Personal contact with other learners is too limited (n=172)

Figure 4.163 indicates the level of agreement on the statement that their personal contact with other learners is too limited; namely 48 (27.9%) strongly disagreed, 54 (31.4%) disagreed, 33 (19.2%) agreed, and 37 (21.5%) strongly agreed. The median score was 2.0 (disagree). A slight majority of the respondents (59.3%) disagreed or strongly disagreed, while a substantial number (40.7%) agreed or strongly agreed. Helping respondents to increase personal electronic contact with their peers, requires priority attention.
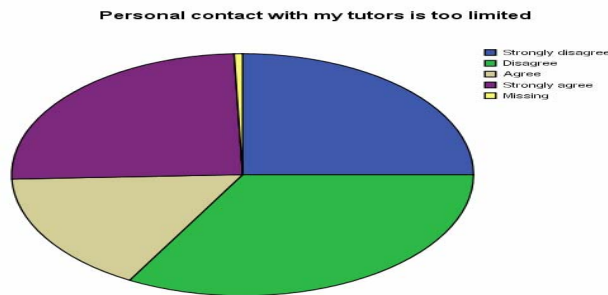
- **Personal contact with my tutors is too limited**

Figure 4.164 Personal contact with my tutors is too limited (n=171)

Figure 4.164 indicates the level of agreement on the statement that personal contact with their tutors is too limited; namely 43 (25.0%) strongly disagreed, 57 (33.1%) disagreed, 28 (16.3%) agreed, and 43 (25.0%) strongly agreed. There was 1 (0.6%) missing value. The median score was 2.0 (disagree). A slight majority of the respondents (58.1%) disagreed or strongly disagreed, and a substantial number (41.3%) agreed or strongly agreed. Helping respondents to increase personal electronic contact with their tutors requires attention.

4.2.5.2 Third year respondents

The research findings pertaining to the third year respondents are presented in the following section. The colour codes for the responses in the pie diagrams are as follows:

Strongly agree;   *Agree;*   *Disagree;*   *Strongly disagree;*   *Missing value*

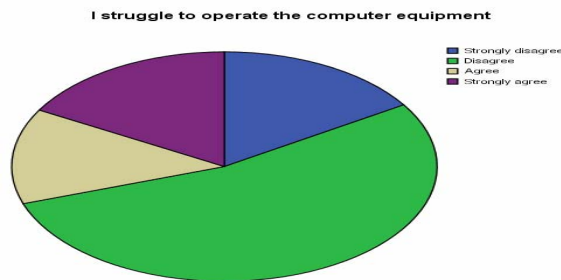- **I struggle to operate the computer equipment**

Figure 4.165   I struggle to operate the computer equipment (n=119)

Figure 4.165 indicates the level of agreement on the statement that that they struggle to operate the computer equipment; namely 19 (16.0%) strongly disagreed, 64 (53.8%) disagreed, 16 (13.4%) agreed, and 20 (16.8%) strongly agreed. The median score was 2.0 (disagree). Although the majority of the respondents (69.8%) disagreed or strongly disagreed, a substantial number (30.2%) agreed or strongly agreed. Most respondents therefore appeared not to struggle to operate the computer equipment, but a reasonable number needed assistance in learning to operate the equipment.

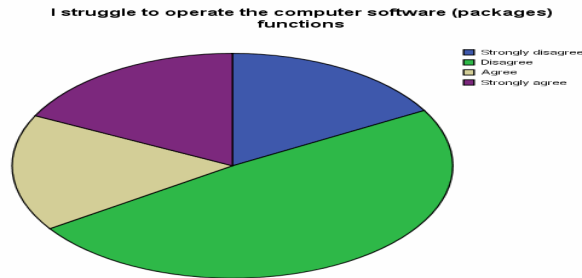- **I struggle to operate the computer software (packages) functions**

Figure 4. 166 I struggle to operate the computer software (packages) functions (n=119)

Figure 4.166 indicates the level of agreement on the statement that they struggle to operate the computer software (packages) functions; namely 20 (16.8%) strongly disagreed, 58 (48.7%) disagreed, 20 (16.8%) agreed, and 21 (17.6%) strongly agreed. The median score was 2.0 (disagree). The majority of the respondents (65.5%) disagreed or strongly disagreed, while a substantial number (34.4%) agreed or strongly agreed. Most respondents therefore appeared not to struggle to operate the computer software functions, but a reasonable number needed assistance in learning to operate these functions.

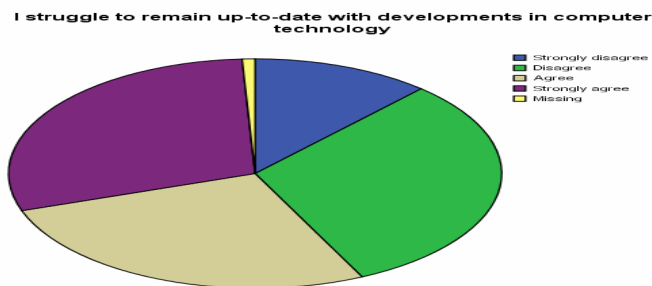- **I struggle to remain up-to-date with developments in computer technology**

Figure 4.167   I struggle to remain up-to-date with developments in computer technology (n=118)

Figure 4.167 indicates the level of agreement on the statement that they struggle to remain up-to-date with developments in computer technology; namely 14 (11.8%) strongly disagreed, 37 (31.1%) disagreed, 32 (26.9%) agreed, and 35 (29.4%) strongly agreed. There was 1 (0.8%) missing value. The median score was 3.0 (disagree). Although the majority of the respondents (56.3%) agreed or

strongly agreed, a substantial number (42.9%) disagreed or strongly disagreed. Helping respondents to remain up-to-date with developments in computer technology therefore requires attention.
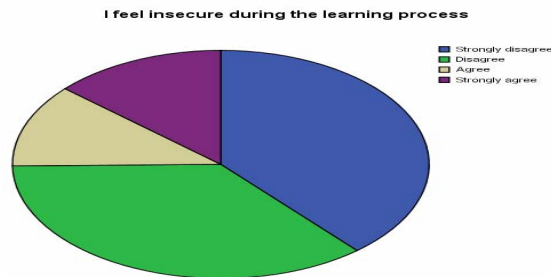
- **<u>I feel insecure during the learning process</u>**

Figure 4.168   I feel insecure during the learning process (n=119)

Figure 4.168 indicates the level of agreement on the statement that they feel insecure during the learning process; namely 46 (38.7%) strongly disagreed, 43 (36.1%) disagreed, 14 (11.8%) agreed, and 16 (13.4%) strongly agreed. The median score was 2.0 (strongly disagree). The majority of the respondents (74.8%) disagreed or strongly disagreed, while a reasonable number (25.2%) agreed or strongly agreed. Although the majority of respondents were not hampered by feelings of insecurity, it appeared to be problematic for some of the respondents.
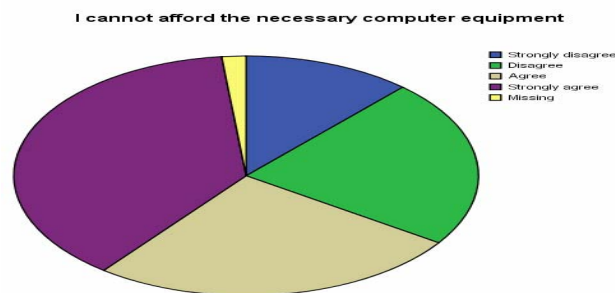
- **<u>I cannot afford the necessary computer equipment</u>**

Figure 4.169   I cannot afford the necessary computer equipment (n=117)

Figure 4.169 indicates the level of agreement on the statement that they cannot afford the necessary computer equipment; namely 27 (22.7%) strongly disagreed, 14 (11.8%) disagreed, 31 (26.1%) agreed, and 45 (37.8%) strongly agreed. There were 2 (1.7%) missing values. The median score was

3.0 (strongly agreed). The majority of the respondents (63.9%) agreed or strongly agreed, and a substantial number (34.5%) disagreed or strongly disagreed. While some respondents appeared to be able to afford the necessary computer equipment, most were unable to do so. This state of affairs may lead to inequity with regard to respondents' ability to engage in computer assisted instruction activities at home.

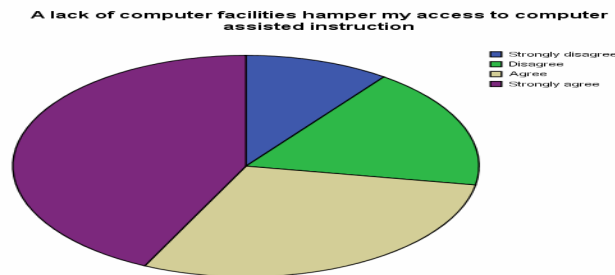- **A lack of computer facilities hamper my access to computer assisted instruction**

Figure 4.170   A lack of computer facilities hamper my access to computer assisted instruction (n=119)

Figure 4.170 indicates the level of agreement on the statement that a lack of computer facilities hamper their access to computer assisted instruction; namely 12 (10.1%) strongly disagreed, 21 (17.6%) disagreed, 35 (29.4%) agreed, and 51 (42.9%) strongly agreed. The median score was 3.0 (strongly disagreed). The majority of the respondents (72.3%) agreed or strongly agreed, and a reasonable number (27.7%) disagreed or strongly disagreed. While some respondents appeared to have had access to computer equipment at home, most did not have this access. This state of affairs may lead to inequity with regard to the respondents' ability to engage in computer assisted instruction activities.

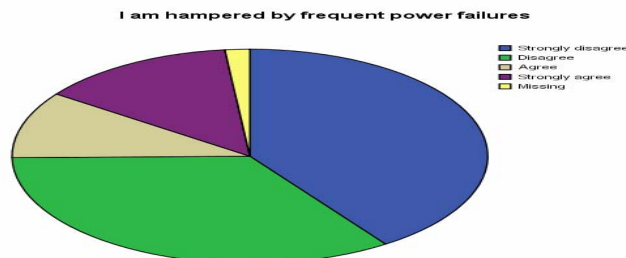- **I am hampered by frequent power failures**

Figure 4.171   I am hampered by frequent power failures (n=117)

Figure 4.171 indicates the level of agreement on the statement that they are hampered by frequent power failures; namely 48 (40.3%) strongly disagreed, 41 (34.5%) disagreed, 12 (10.1%) agreed, and 16 (13.4%) strongly agreed. There were 2 (1.7%) missing values. The median score was 2.0 (strongly disagree). A substantial majority of the respondents (74.8%) disagreed or strongly disagreed. Frequent power failures therefore did not appear to be of major concern.

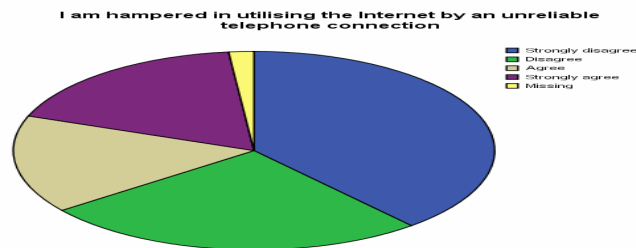- **I am hampered from utilising the Internet due to an unreliable telephone connection**

Figure 4. 172 I am hampered from utilising the Internet due to an unreliable telephone connection (n=117)

Figure 4.172 indicates the level of agreement on the statement that they are hampered in utilising the Internet by unreliable telephone connections; namely 46 (38.7%) strongly disagreed, 31 (26.1%) disagreed, 19 (16.0%) agreed, and 21 (18.0%) strongly agreed. There were 2 (1.7%) missing values. The median score was 2.0 (strongly disagree). The majority of the respondents (64.8%) disagreed or strongly disagreed, while a substantial number (34.0%) agreed or strongly agreed. Although the majority of respondents were not hampered by unreliable telephone connections, it appeared to be problematic for many of the respondents.

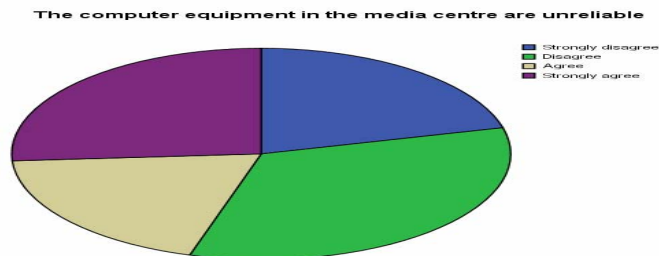- **The computer equipments in the media centre are unreliable**

Figure 4.173   The computer equipments in the media centre are unreliable (n=119)

Figure 4.173 indicates the level of agreement on the statement that the computer equipments in the media centre are unreliable; namely 25 (21.0%) strongly disagreed, 40 (33.6%) disagreed, 23 (19.3%) agreed, and 23 (26.1%) strongly agreed. The median score was 2.0 (disagreed). The majority of the respondents (54.6%) disagreed or strongly disagreed, while a substantial number (45.4%) agreed or strongly agreed. A slight majority of respondents were not hampered by unreliable computer equipment in the media centre. However it appeared to be problematic for many respondents.

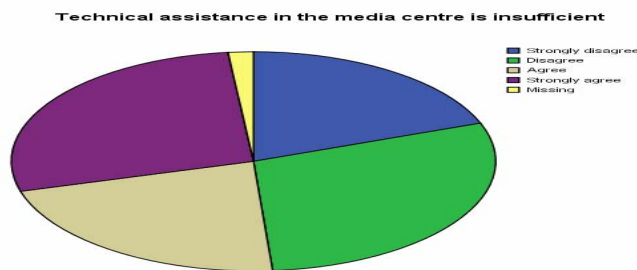- **Technical assistance in the media centre is insufficient**

Figure 4.174 Technical assistance in the media centre is insufficient (n=117)

Figure 4.174 indicates the level of agreement on the statement that the technical assistance in the media centre is insufficient; namely 23 (19.3%) strongly disagreed, 35 (29.4%) disagreed, 26 (21.8%) agreed, and 33 (27.7%) strongly agreed. There were 2 (1.7%) missing values. The median score was 3.0 (disagreed). Almost the same number of respondents agreed or strongly agreed (49.5%), and disagreed or strongly disagreed (48.7%). Insufficient technical assistance in the media centre therefore appears to be a major problem.

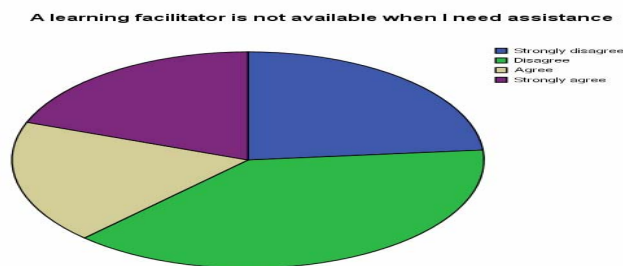- **A learning facilitator is not available when I need assistance**

Figure 4.175 A learning facilitator is not available when I need assistance (n=119)

Figure 4.175 indicates the level of agreement on the statement that a learning facilitator is not available when they need assistance; namely 28 (23.5%) strongly disagreed, 46 (38.7%) disagreed, 22 (18.5%) agreed, and 23 (19.3%) strongly agreed. The median score was 2.0 (disagree). The majority of the respondents (62.2%) disagreed or strongly disagreed, while a substantial number (37.8%) agreed or strongly agreed. Although the majority of respondents were not hampered by the unavailability of a learning facilitator, it appeared to be problematic for many respondents.

- **The learning facilitator is not proficient in computer assisted instruction**
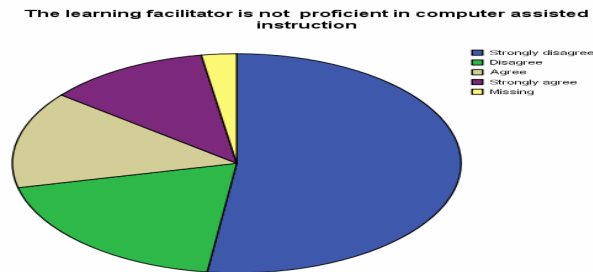

Figure 4.176 The learning facilitator is not proficient in computer assisted instruction (n=116)

Figure 4.176 indicates the level of agreement on the statement that the learning facilitator is not proficient in computer assisted instruction; namely 62 (52.1%) strongly disagreed, 23 (19.3%) disagreed, 17 (14.3%) agreed, and 14 (11.8%) strongly agreed. There were 3 (2.5%) missing values. The median score was 1.0 (strongly disagree). The majority of the respondents (71.4%) disagreed or strongly disagreed, while a reasonable number (26.1%) agreed or strongly agreed. Although most of the respondents appeared to be satisfied with the proficiency of the learning facilitator, this appeared to be problematic for some respondents.

- **Computer- assisted instruction is not my preferred way of learning**
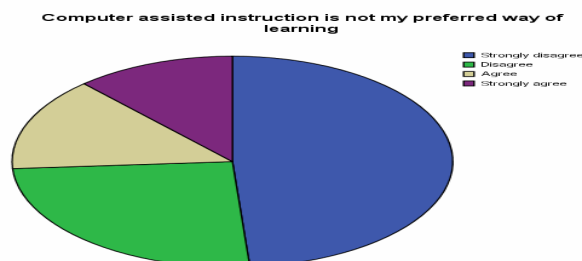

Figure 4.177 Computer assisted instruction is not my preferred way of learning (n=119)

Figure 4.177 indicates the level of agreement on the statement that computer assisted instruction is not their preferred way of learning; namely 58 (48.7%) strongly disagreed, 30 (25.2%) disagreed, 17 (14.3%) agreed, and 14 (11.8%) strongly agreed. The median score was 2.0 (strongly disagree). The majority of the respondents (73.9%) disagreed or strongly disagreed, while a reasonable number (26.1%) agreed or strongly agreed. Computer assisted instruction was therefore a preferred way of learning for most respondents, but some stated the contrary.

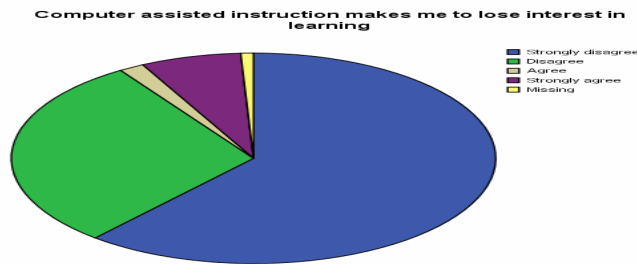- **Computer assisted instruction makes me to loose interest in learning**

Figure 4.178 Computer assisted instruction makes me to loose interest in learning (n=118)

Figure 4.178 indicates the level of agreement on the statement that computer assisted instruction makes them to lose interest in learning; namely 73 (61.3%) strongly disagreed, 35 (29.4%) disagreed, 2 (1.7%) agreed, and 8 (6.7%) strongly agreed. There was 1 (0.8%) missing item. The median score was 1.0 (strongly disagree). A substantial majority of the respondents (90.7%) disagreed or strongly disagreed. Computer assisted instruction therefore generally promoted the respondents' interest in learning.

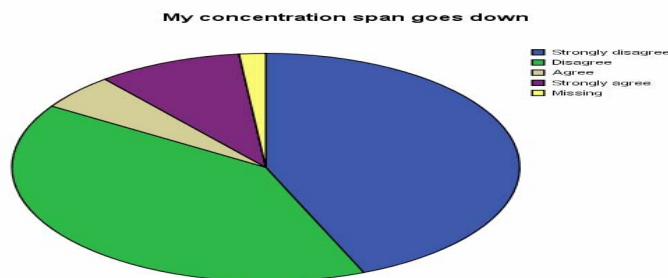- **My concentration span goes down**

Figure 4.179 My concentration span goes down (n=117)

Figure 4.179 indicates the level of agreement on the statement that their concentration span goes down; namely 52 (43.7%) strongly disagreed, 48 (40.3%) disagreed, 6 (5.0%) agreed, and 11 (9.2%) strongly agreed. There were 2 (1.7%) missing values. The median score was 2.0 (strongly disagree). A substantial majority of the respondents (84.0%) disagreed or strongly disagreed. Computer assisted instruction therefore generally promoted respondents' concentration.

- **I struggle to independently obtain information from the Internet**
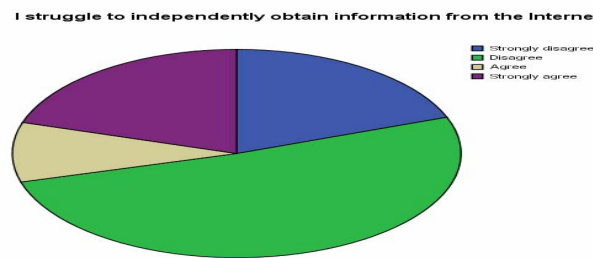

Figure 4.180   I struggle to independently obtain information from the Internet (n=119)

Figure 4.180 indicates the level of agreement on the statement that they struggle to independently obtain information from the Internet; namely 23 (19.3%) strongly disagreed, 61 (51.3%) disagreed, 11 (9.2%) agreed, and 24 (20.2%) strongly agreed. The median score was 2.0 (disagreed). The majority of the respondents (70.6%) disagreed or strongly disagreed, while a reasonable number (29.4%) agreed or strongly agreed. Although the majority of respondents did not struggle to independently obtain information from the Internet, it appeared to be problematic for some respondents.

- **I struggle to achieve my learning objectives through reading skills computer packages**
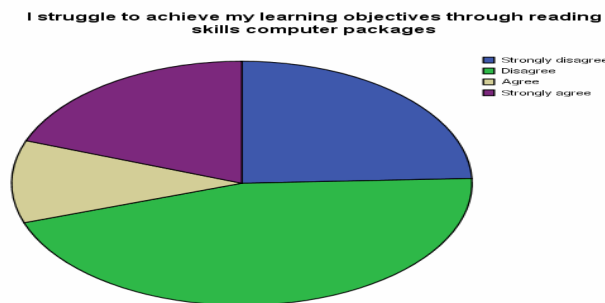

Figure 4.181   I struggle to achieve my learning objectives through reading skills computer packages (n=119)

Figure 4.181 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through reading skills computer packages; namely 29 (24.4%) strongly disagreed, 54 (45.4%) disagreed, 13 (10.9%) agreed, and 23 (19.3%) strongly agreed. The median score was 2.0 (disagree). The majority of the respondents (69.8%) disagreed or strongly disagreed, while a substantial number (30.2%) agreed or strongly agreed. Although the majority of respondents did not struggle to achieve their learning objectives through reading skills computer packages, it appeared to be problematic for many respondents.

- **I struggle to achieve my learning objectives through typing skills computer packages**
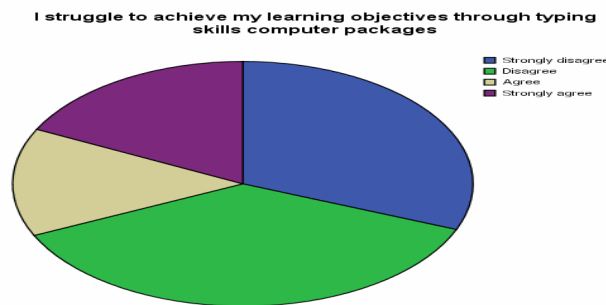

Figure 4.182   I struggle to achieve my learning objectives through typing skills computer packages (n=119)

Figure 4.182 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through typing skills computer packages; namely 37 (24.4%) strongly disagreed, 44 (37.0%) disagreed, 17 (14.3%) agreed, and 21 (18.0%) strongly agreed. The median score was 2.0 (disagree). The majority of the respondents (61.4%) disagreed or strongly disagreed, while a substantial number (32.3%) agreed or strongly agreed. Although the majority of respondents did not struggle to achieve their learning objectives through typing skills computer packages, it appeared to be problematic for many respondents.

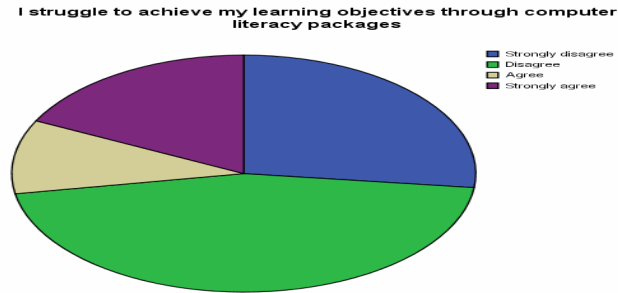- **I struggle to achieve my learning objectives computer literacy packages**

Figure 4.183   I struggle to achieve my learning objectives computer literacy packages (n=119)

Figure 4.183 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through computer literacy packages; namely 32 (26.9%) strongly disagreed, 54 (45.4%) disagreed, 12 (10.1%) agreed, and 21 (18.0%) strongly agreed. The median score was 2.0 (disagreed). The majority of the respondents (72.3%) disagreed or strongly disagreed, while a substantial number (28.1%) agreed or strongly agreed. Although the majority of respondents did not struggle to achieve their learning objectives through computer literacy packages, it appeared to be problematic for some respondents.

- **I struggle to achieve my learning objectives through text-based course content computer packages**

Figure 4.184   I struggle to achieve my learning objectives through text-based course content computer packages (n=118)

Figure 4.184 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through text-based course content computer packages; namely 26 (21.8%) strongly disagreed, 54 (45.4%) disagreed, 18 (15.1%) agreed, and 20 (16.8%) strongly agreed.

There was 1 (0.8%) missing value. The median score was 2.0 (disagree). The majority of the respondents (67.2%) disagreed or strongly disagreed, while a substantial number (31.9%) agreed or strongly agreed. Although the majority of respondents did not struggle to achieve their learning objectives through text-based course content computer package, it appeared to be problematic for many respondents.

- **I struggle to achieve my learning objectives through multimedia course content computer packages**
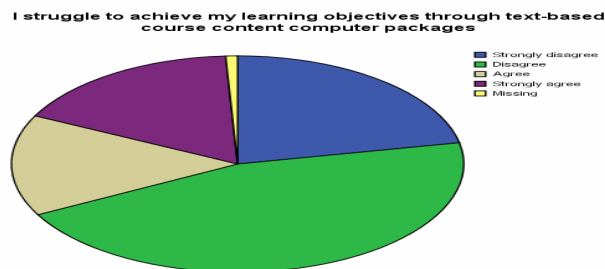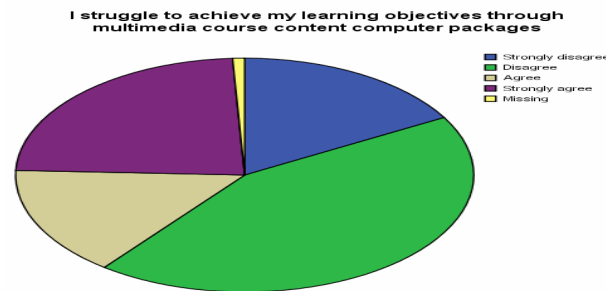

Figure 4.185   I struggle to achieve my learning objectives through multimedia course content computer packages (n=118)

Figure 4.185 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through multimedia course content computer packages; namely 20 (16.8) strongly disagreed, 52 (43.7%) disagreed, 18 (15.1%) agreed, and 28 (23.5%) strongly agreed. There was 1 (0.8%) missing value. The median score was 2.0 (disagree). The majority of the respondents (60.5%) disagreed or strongly disagreed, while a substantial number (38.6%) agreed or strongly agreed. Although the majority of respondents did not struggle to achieve their learning objectives through multimedia course content computer packages, it appeared to be problematic for many respondents.

- **I struggle to achieve my learning objectives through text-based computer packages that provide scenarios that develop my problem-solving skills**
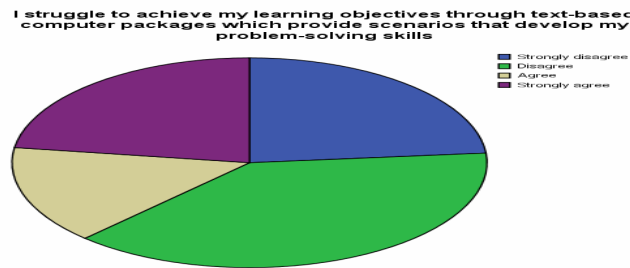

Figure 4.186   I struggle to achieve my learning objectives through text-based computer packages that provide scenarios that develop my problem-solving skills (n=119)

Figure 4.186 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through text-based computer packages, which provide scenarios that develop their problem-solving skills; namely 28 (23.5) strongly disagreed, 46 (38.7%) disagreed, 18 (15.1%) agreed, and 27 (22.7%) strongly agreed. The median score was 2.0 (disagree). The majority of the respondents (62.2%) disagreed or strongly disagreed, while a substantial number (37.8%) agreed or strongly agreed. Although a slight majority of respondents did not struggle to achieve their learning objectives through text-based computer packages that provide scenarios that develop their problem-solving skills, it appeared to be problematic for many respondents.

- **I struggle to achieve my learning objectives through multimedia computer packages that provide scenarios that develop my problem-solving skills**
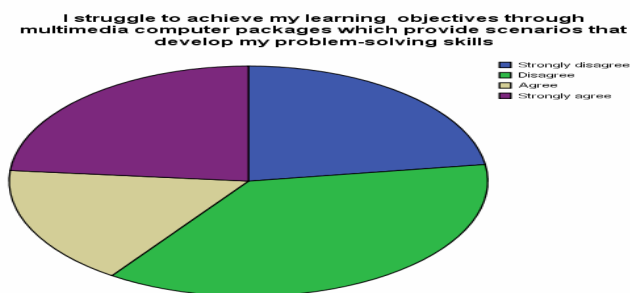

Figure 4.187   I struggle to achieve my learning objectives through multimedia computer packages that provide scenarios that develop my problem-solving skills (n=119)

Figure 4.187 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through multimedia computer packages, which provide scenarios that develop their problem-solving skills; namely 27 (22.7%) strongly disagreed, 44 (37.0%) disagreed, 20 (16.8%) agreed, and 28 (23.5%) strongly agreed. The median score was 2.0 (disagree). The majority of the respondents (59.7%) disagreed or strongly disagreed, while a substantial number (40.3%) agreed or strongly agreed. A slight majority of respondents did not struggle to achieve their learning objectives through multimedia computer packages that provide scenarios that develop their problem-solving skills. However, it appeared to be problematic for many respondents.

- **I struggle to achieve my learning objectives through computer packages simulating clinical situations that develop my decision-making skills**
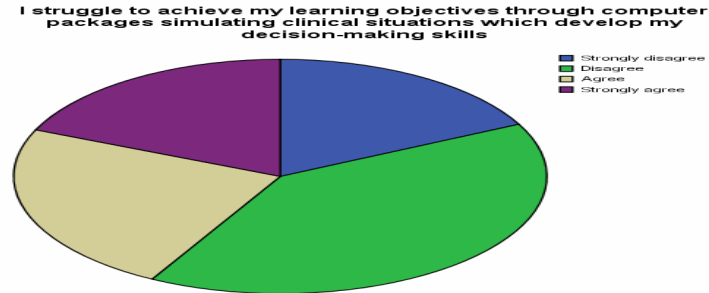

Figure 4.188   I struggle to achieve my learning objectives through computer packages simulating clinical situations that develop my decision-making skills (n=119)

Figure 4.188 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through computer packages simulating clinical situations, which develop their decision-making skills; namely 21 (17.6%) strongly disagreed, 48 (40.3%) disagreed, 28 (23.5%) agreed, and 22 (18.5%) strongly agreed. The median score was 2.0 (disagree). Most of the respondents (57.9%) disagreed or strongly disagreed, and a substantial number (42.0%) agreed or strongly agreed. Although a slight majority of respondents did not struggle to achieve their learning objectives through computer packages simulating clinical situations that develop their decision-making skills, it appeared to be problematic for many respondents.

- **I struggle to achieve my learning objectives through computer-gaming packages**
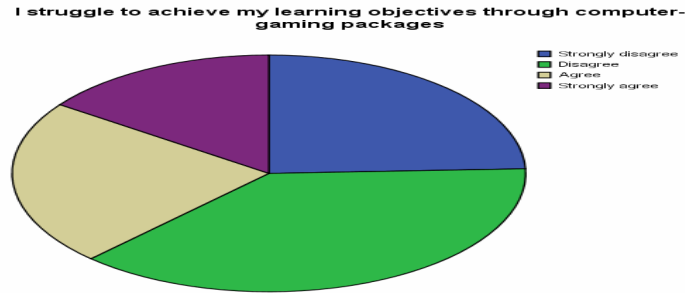

Figure 4.189 I struggle to achieve my learning objectives through computer gaming packages (n=119)

Figure 4.189 indicates the level of agreement on the statement that they struggle to achieve their learning objectives through computer gaming packages; namely 29 (24.4%) strongly disagreed, 45 (37.8%) disagreed, 27 (22.7%) agreed, and 18 (15.1%) strongly agreed. The median score was 2.0 (disagree). The majority of the respondents (62.2%) disagreed or strongly disagreed, while a substantial number (37.8%) agreed or strongly agreed. Although most of the respondents did not struggle to achieve their learning objectives through computer gaming packages, it appeared to be problematic for many respondents.

- **I struggle to achieve my learning objectives when trying to obtain information on the Internet**
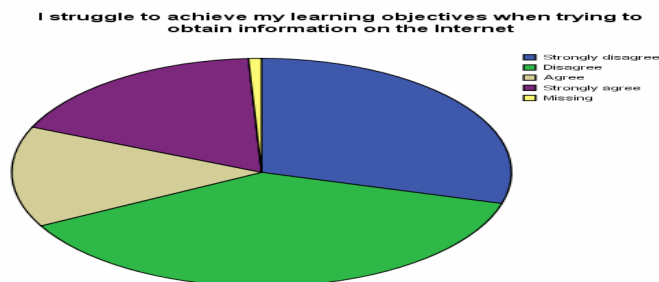

Figure 4.190   I struggle to achieve my learning objectives when trying to obtain information on the Internet (n=118)

Figure 4.190 indicates the level of agreement on the statement that they struggle to achieve their learning objectives when trying to obtain information on the Internet; namely 35 (29.4%) strongly

disagreed, 45 (37.8%) disagreed, 17 (14.3%) agreed, and 21 (17.6%) strongly agreed. There was 1 (0.8%) missing value. The median score was 2.0 (disagree). The majority of the respondents (67.2%) disagreed or strongly disagreed, a substantial number (31.9%) agreed or strongly agreed. Although most of the respondents did not struggle to obtain information on the Internet it appeared to be problematic for many respondents.

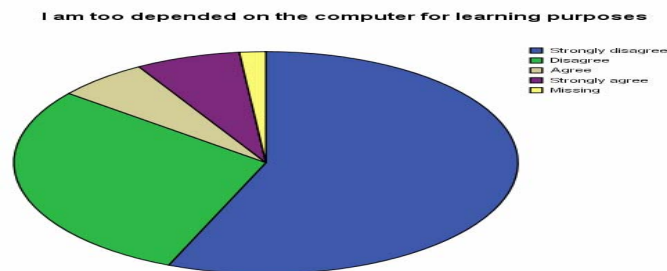- **I am too depended on the computer for learning purposes**

Figure 4.191   I am too depended on the computer for learning purposes (n=117)

Figure 4.191 indicates the level of agreement on the statement that they are too depended on the computer for learning purposes; namely 67 (56.3%) strongly disagreed, 35 (29.4%) disagreed, 7 (5.9%) agreed, and 8 (6.7%) strongly agreed. There were 2 (1.7%) missing values. The median score was 1.0 (strongly disagreed). A substantial majority of the respondents disagreed or strongly disagreed (85.7%). The respondents were therefore generally not too dependent on the computer for learning purposes.

- **I loose sight of my learning objectives because I focus too much on the technical equipment**
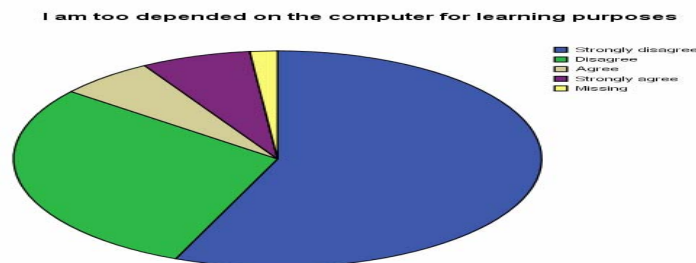

Figure 4.192   I loose sight of my learning objectives because I focus too much on the technical equipment (n=119)

Figure 4.192 indicates the level of agreement on the statement that they lose sight of their learning objectives because they focus too much on the technical equipment; namely 62 (52.1%) strongly disagreed, 32 (26.9%) disagreed, 15 (12.6%) agreed, and 10 (8.4%) strongly agreed. The median score was 1.0 (strongly disagree). A substantial majority (79.0%) disagreed or strongly disagreed. The respondents therefore generally did not loose sight of their learning objectives because they focused too much on the technical equipment.
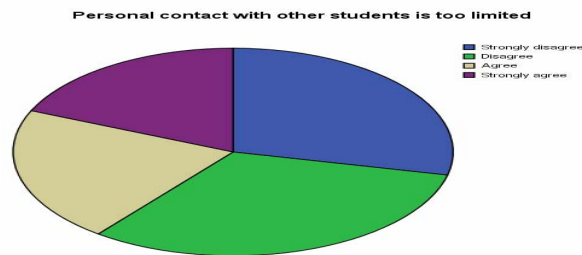
- **Personal contact with other learners is too limited**

Figure 4.193   Personal contact with other learners is too limited (n=119)

Figure 4.193 indicates the level of agreement on the statement that personal contact with other learners is too limited; namely, 34 (28.6%) strongly disagreed, 38 (31.9%) disagreed, 25 (21.0%) agreed, and 22 (18.5%) strongly agreed. The median score was 2.0 (disagree). The majority of the respondents (60.5%) disagreed or strongly disagreed, and a substantial number (39.5%) agreed or strongly agreed. Although most respondents did not believe that personal electronic contact with their peers was too limited, it is problematic for many.

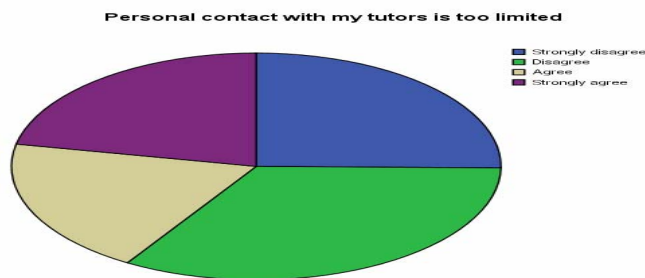- **Personal contact with my tutors is too limited**

Figure 4.194   Personal contact with my tutors is too limited (n=119)

Figure 4.194 indicates the level of agreement on the statement that personal contact with their tutors is too limited; namely 30 (25.2%) strongly disagreed, 40 (33.6%) disagreed, 23 (19.3%) agreed, and 26 (21.8%) strongly agreed. The median score was 2.0 (disagree). A slight majority of the respondents (58.8%) disagreed or strongly disagreed, but a substantial number (41.1%) agreed or strongly agreed. Helping respondents to increase personal electronic contact with their tutors therefore requires attention.

4.2.5.3 Comparison between the responses of the second and third year respondents

The Mann-Whitney U-test indicated that there were no significant differences between the second and third year respondents' responses on the following items:

- I struggle to operate the computer equipment (p=0.466)
- I struggle to operate the computer software (packages) functions (p=0.619)
- I struggle to remain up-to-date with developments in computer technology (p=0.531)
- I feel insecure during the learning process (p=0.244)
- I cannot afford the necessary computer equipment (p=0.660)
- A lack of computer facilities hamper my access to computer assisted instruction (p=0.837)
- I am hampered by frequent power failures (p=0.117)
- I am hampered in utilising the Internet by an unreliable telephone connection (p=0.477)
- Technical assistance in the media centre is insufficient (p=0.060)
- A learning facilitator is not available when I need assistance (p=0.204)
- The learning facilitator is not proficient in computer assisted instruction (p=0.534)
- Computer assisted instruction is not my preferred way of learning (p=0.345)
- Computer assisted instruction makes me to lose interest in learning (p=0.174)
- My concentration span goes down (p=0.454)
- I struggle to independently obtain information from the Internet (p=0.865)
- I struggle to achieve my learning objectives through reading skills computer packages (p=0.310)
- I struggle to achieve my learning objectives through typing skills computer packages (p=0.529)
- I struggle to achieve my learning objectives computer literacy packages (p=0.624)

- I struggle to achieve my learning objectives through text-based course content computer packages (p=0.649)

- I struggle to achieve my learning objectives through multimedia course content computer packages (p=0. 931)

- I struggle to achieve my learning objectives through text-based computer packages, which provide scenarios that develop my problem-solving skills (p=0.583)

- I struggle to achieve my learning objectives through multimedia computer packages, which provide scenarios that develop my problem-solving skills (p=0.373)

- I struggle to achieve my learning objectives through computer packages simulating clinical situations, which develop my decision-making skills (p=0.0.973)

- I struggle to achieve my learning objectives through computer-gaming packages (p=0.478)

- I struggle to achieve my learning objectives when trying to obtain information on the Internet (p=0.619)

- I am too depended on the computer for learning purposes (p=0.323)

- I lose sight of my learning objectives because I focus too much on the technical equipment (p=0.550)

- Personal contact with other learners is too limited (p=0.737)

- Personal contact with my tutors is too limited (p=0.812)

The Mann-Whitney U-test indicated that there was a significant difference between the second and third year respondents' responses on the following item:

- The computer equipments in the media centre are unreliable (p=0.021) The third year respondents (mean=2.50) were more inclined than the second year respondents (mean=2.20) to agree that the computer equipments in the media centre are unreliable

4.2.6 Learner preference with regard to teaching strategy

Sections F of the questionnaire dealt with whether the respondents preferred computer assisted instruction or traditional teaching strategies.

4.2.6.1 Second year respondents

The research findings pertaining to the second year respondents are presented in the following section. The colour codes for the responses in the pie diagrams are as follows:

     Prefer computer assisted instruction;   *Prefer traditional teaching*;

     Missing value

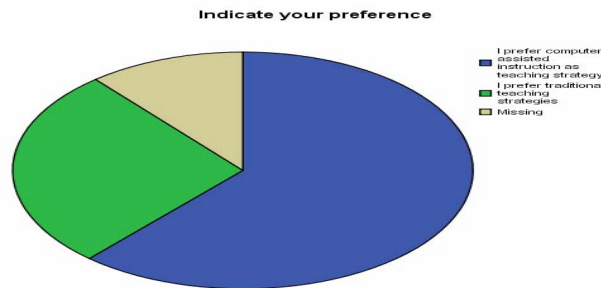- **Respondents' teaching strategy preference**

Figure 4.195   Indication of preferences between computer assisted instruction and traditional teaching as teaching strategies   (n=153)

Figure 4.195 indicates that 106 (61.6%) of the respondents preferred computer assisted instruction as a teaching strategy, and 47 (27.3%) preferred traditional teaching. There were 19 (12.4%) missing values. The mode is 1.00 respondents (prefer computer assisted instruction). Although the majority of respondents (61.6%) preferred computer assisted instruction as a teaching strategy, some (27.3%) indicated the contrary.

4.2.6.2 Third year respondents

The research findings pertaining to the second year respondents are presented in the following section. The colour codes for the responses in the pie diagrams are as follows:

     Prefer computer assisted instruction;   *Prefer traditional teaching*;

     Missing value

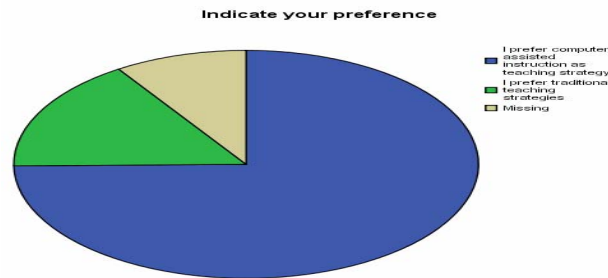- **Respondents' teaching strategy preference**

Figure 4.196   Indication of preferences between computer assisted instruction and traditional teaching as teaching strategies (n=108)

Figure 4.196 indicates that 89 (74.8%) of the respondents preferred computer assisted instruction as a teaching strategy and 19 (16.0%) preferred traditional teaching. There were 11 (9.2%) missing values. The mode is 1.00 (prefer computer assisted instruction). A substantial majority of respondents (74.8%) therefore preferred computer assisted instruction as a teaching strategy.

4.3   CONCLUSION

Chapter four constitutes the research findings. Although the respondents indicated that they preferred computer assisted instruction as a teaching strategy to the traditional method, the findings revealed evidence of ineffective of this teaching strategy. In the next chapter, the researcher discusses the research results, the limitation of the study, recommendations and conclusions.