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Quantitative Findings and Results Analysis Online Collaboration and Evaluation, Measuring Expectations.

4.1 Introduction

The following results examine measurements as regards to students' expectations. Analyses are subdivided in six different factors measuring communication, content delivery, evaluation, group size, guidance and willingness. Analysis will help to identify the appropriate expectations to design an effective online collaboration system. To understand in depth relationship collaboration between students, each factor will compare students' identity, comparing and examining age gap, experience, gender and course subject to identify variations that might affect collaboration relationship.

The description of this analysis will define the level of tangibility, reliability, assurance, responsiveness and empathy, identifying students' expectations as regards to online collaboration situation.

4.2 Presenting Finding Results

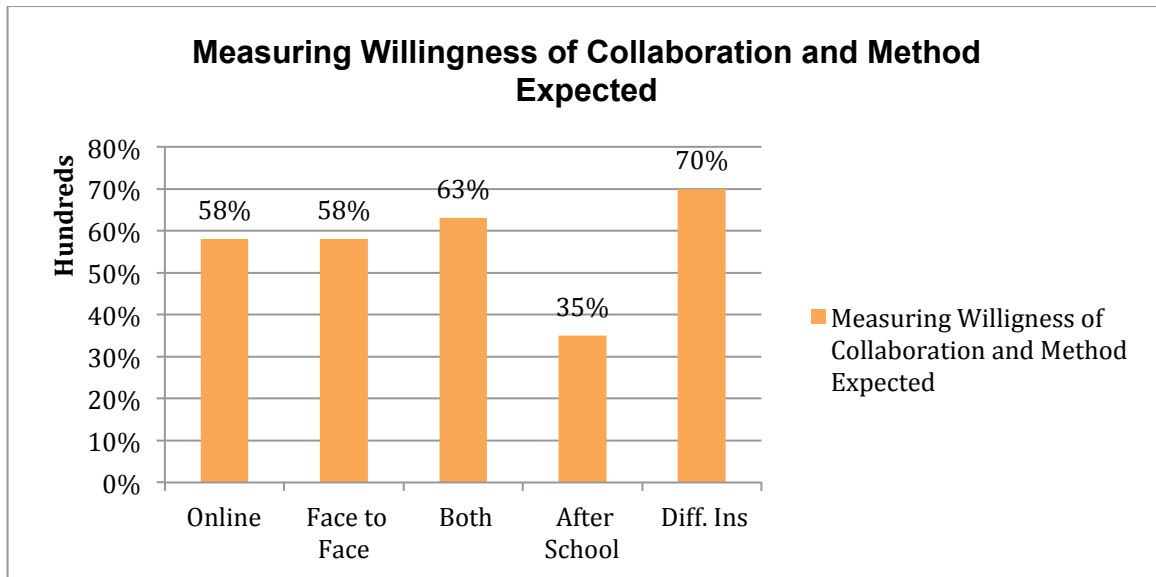


Figure 1: Willingness Factor 1

Factor 1 measures level of willingness as regards to collaboration, methods of collaboration, commitment and co-operation with other institutes.

Hybrid methods prevail on other methods with 63% of students who prefer to collaborate using both methods. After school, hours generated 35% of the students who are committed to collaborate after school hours. Students willing to co-operate with different institutes generated 70% of the students willing to co-operate with different institutes. Results demonstrate that students expect face-to-face interaction but still considering online instructions as an excellent alliance. According to Shanna Smith, 10% of the students in their college are willing to participate in online courses, but 90% said they would like to take some online mixed with face-to-face (Times, 2013). Results show that even in these

circumstances, students prefer a hybrid method for collaboration disagreeing with a complete online course system.

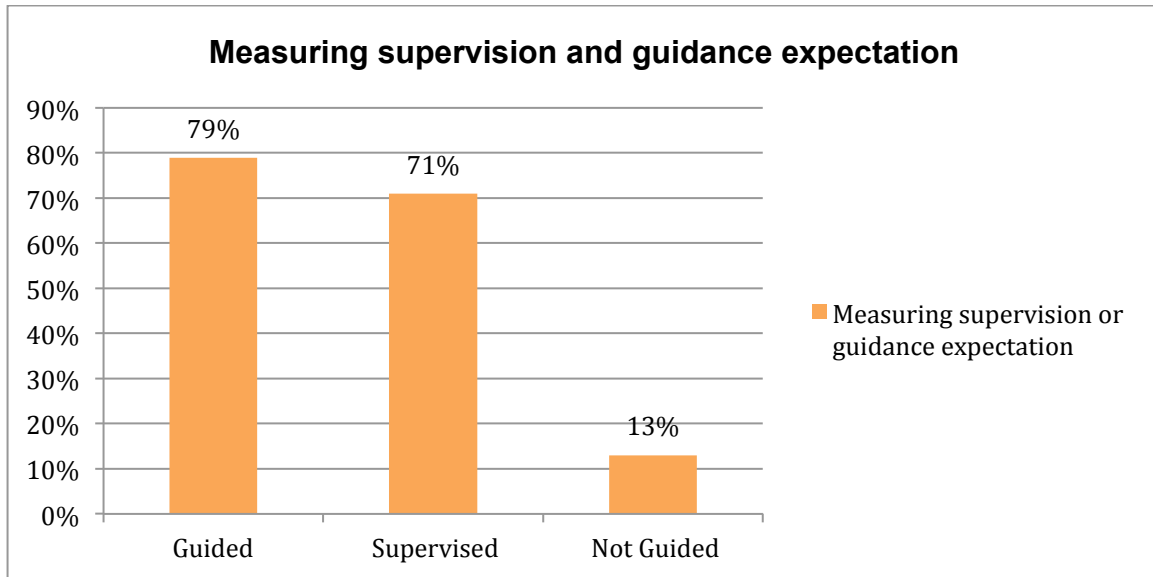


Figure 2: Guidance Factor 2

Factor 2 measures level of expectations related to guidance and supervision. Results show that students definitely expect both supervision and guidance during online collaboration. Students once again demonstrate that the lecturers' assistance is important during online collaboration. Technology and online learning will change the role of a teacher or lecturer but analysis and previous study indicate that students are not ready to replace the lecturer presence with technology. Research indicates that students need to be continuously assessed to have a point of reference especially when they incur into difficulties.

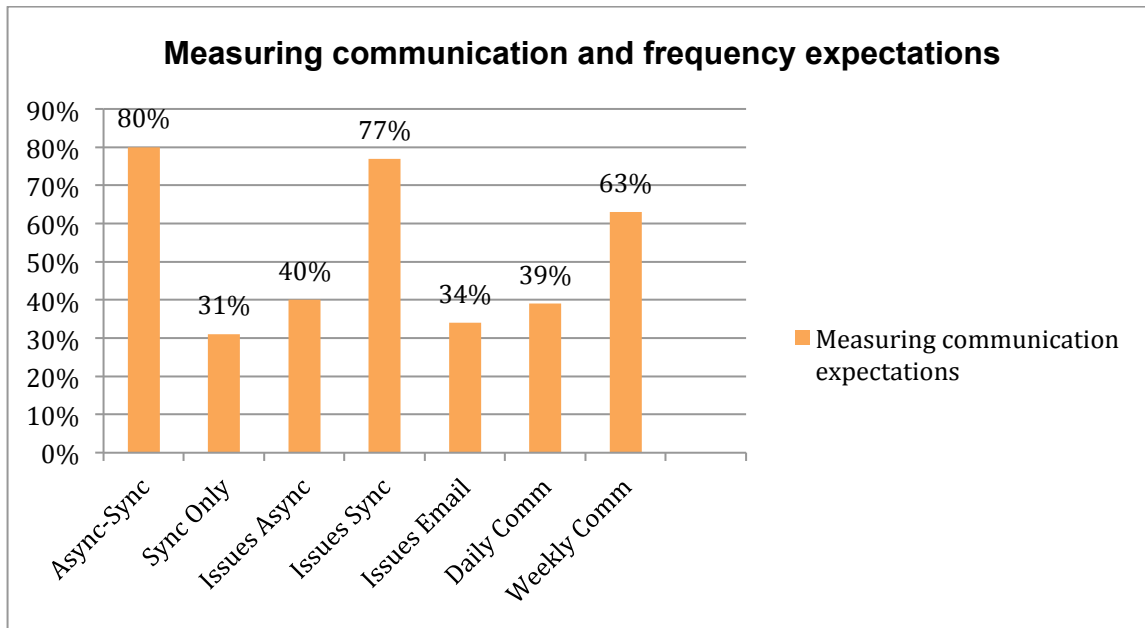


Figure 3: Communication Factor 3

Communication factor 3 measures how students expect to communicate and how frequent they expect to communicate during online collaboration. Results show that 80% of the students expect both methods of communication asynchronous and synchronous while synchronous communication is preferred when discussing issues. As regards to frequency, 63% of the students expect to communicate weekly. Students need to know that they can communicate with the lecturer at any time. This might be why they expect both type of communication asynchronous and synchronous. Access to both type of communication make students feel secure during online study. Is of the utmost importance that the lecturer respond promptly to students requirements otherwise trust can be lost. McInnerney & Roberts, (2004) sustain that, *“for the successful operation of an online course. Wang and Newlin (2001) advocate the simultaneous use of asynchronous and synchronous communication for an online course to be successful”*. McInnerney & Roberts, (2004) also pointed out that *“Clifton (1999) points out that the level of trust between all involved in the educational process has to be high if a sense of community is to develop”*.

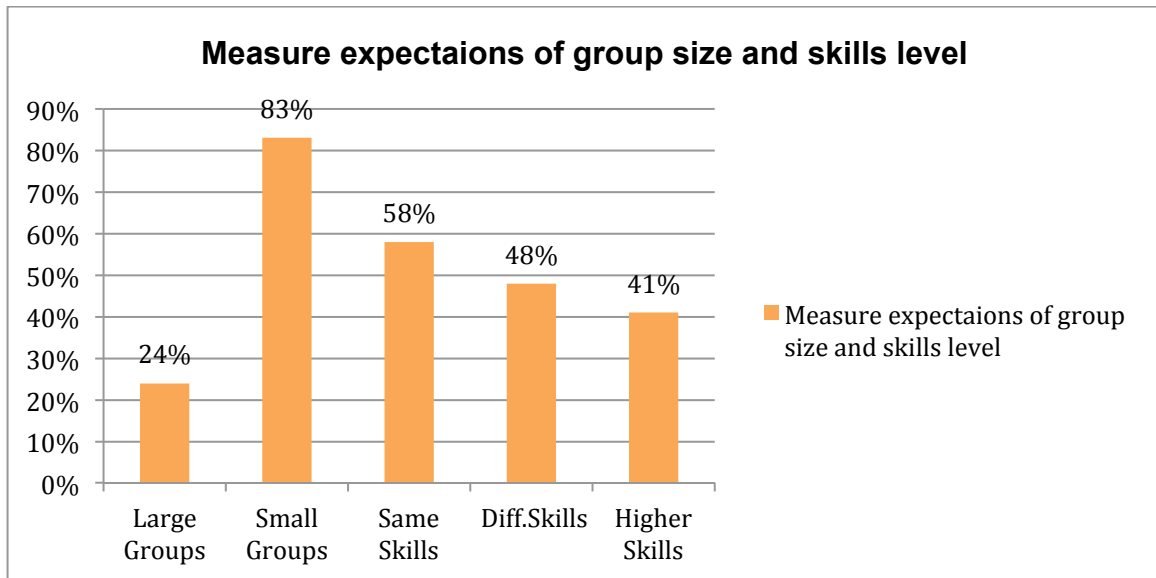


Figure 4: Group Size Factor 4

Factor 4 examines students' expectations related to group size and group skills levels. Results clearly show that 83% of the students expect to work with small groups while 58% expect to work with peers of same skills. Results generated in-group factor brings to understand that students expect equality within groups between few peers. A group work survey conducted by Illingworth, (2007, p2) states that *"When students were asked about the main issues faced by their student groups, the most common response related to equality of contributions"*. Students might have perceived that working within small groups of same skills might enhance equal contribution leading to a fair evaluation.

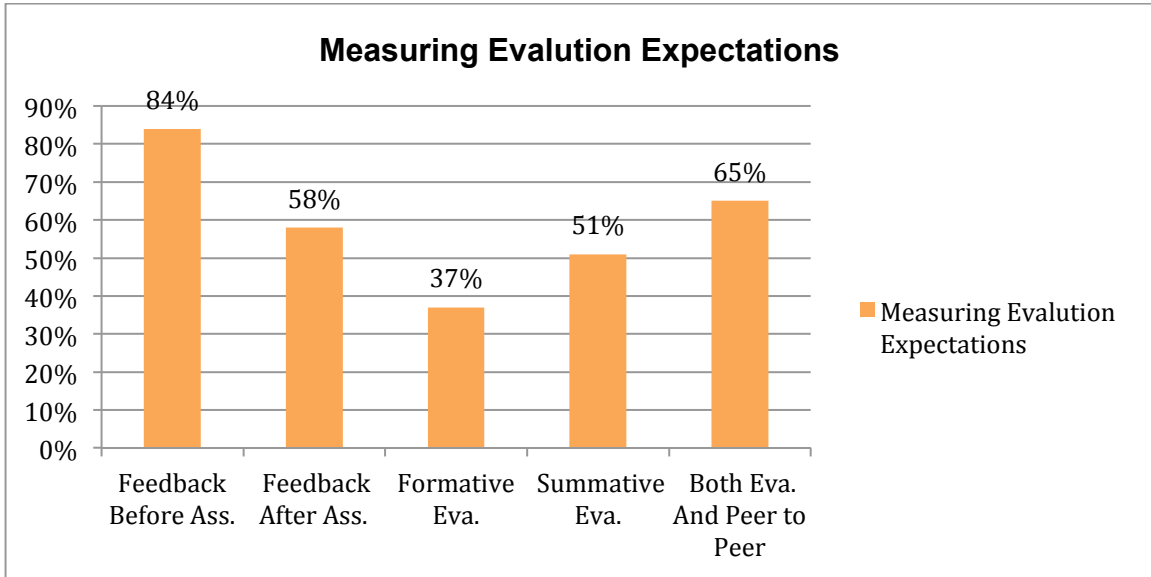


Figure 5: Evaluation Factor 5

Factor 5 examines evaluation to understand if students expect to be evaluated in a summative, formative or both methods. Factor 5 also examines if students want to receive feedback before or after assignment and if they accept peer-to-peer evaluation. Results demonstrate that 84% of the students expect to receive feedback before assignment and 65% expect both summative and formative evaluation including peer- to-peer evaluation.

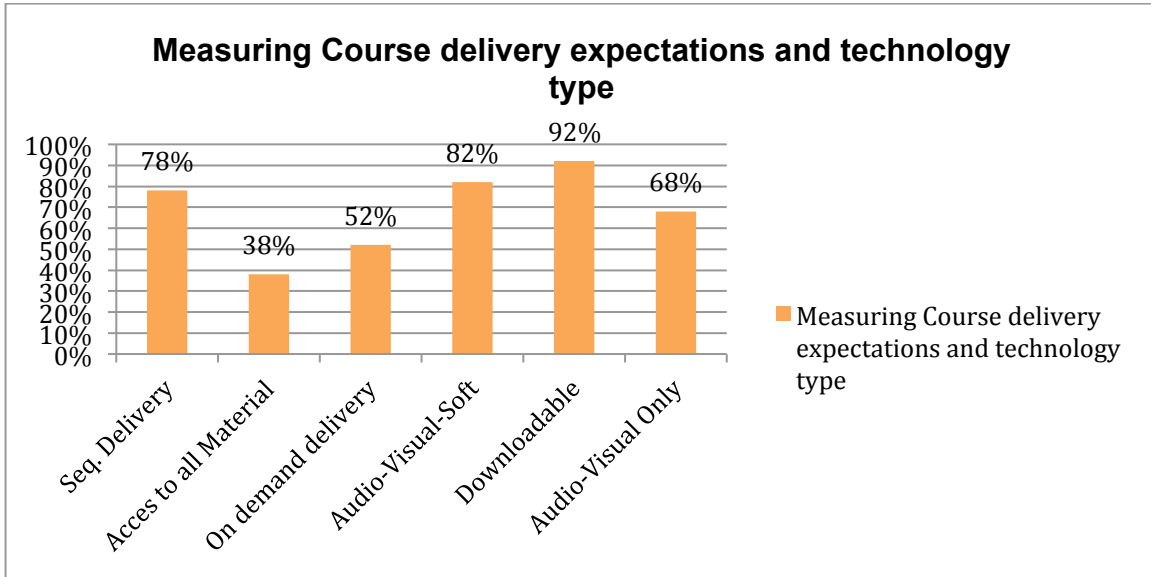


Figure 6: Technology Factor 6

Course delivery and technology results analyses measure students' expectations as regards to course delivery method and technology expected during online collaboration. Results show that 78% of the students expect course delivery in a sequential method including all type of technology and 92% expect material to be downloadable.

4.2 Analyzing Finding Results

4.2.1 Factor 1 Willingness

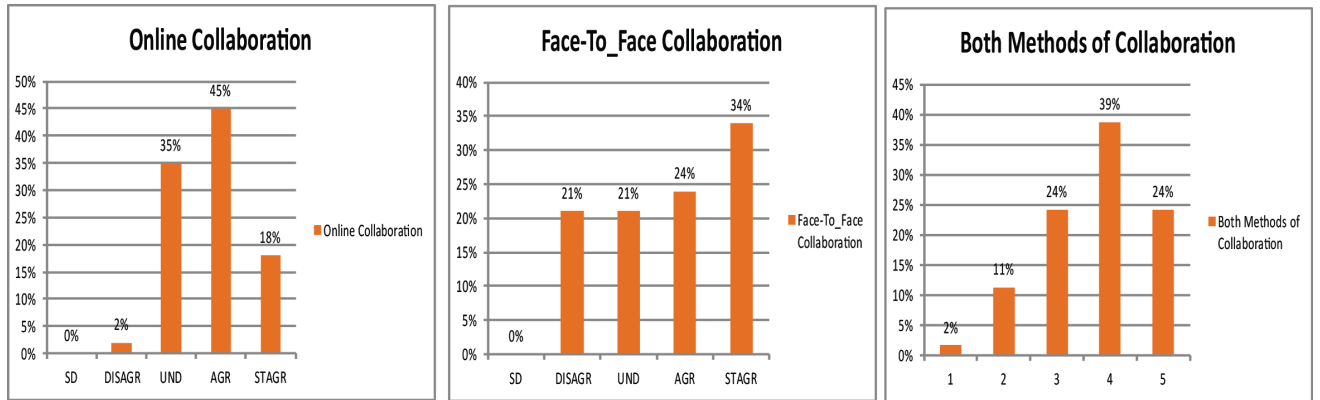


Figure 7: Willingness Graph Analysis

Adding up agree and strongly agree results show that 58% of the students' population is willing to collaborate online. Other results demonstrate that students seriously consider face to face collaboration this is sustained by 58% of the students that agree to collaborate face to face when adding up both agree and strongly agree. This generates an equilibrium between the two methods of collaboration face-to-face and online collaboration. This is evidenced when students are asked if they consider both situation face-to-face and online collaboration. Adding up both agreed results this produces 63% of the students that expect both face-to-face and online collaboration indicating a hybrid collaboration expected from the students. Gartner's survey 2008 found that hybrid or blended learning was the most rapidly growing delivery option when compared with online and traditional delivery. (Hanover, 2009). Results generated in this study support what Gartner sustained in his previous studies. Results indicate that an effective collaboration plan cannot exclude face-to-face interaction. Initially collaboration must happen face-to-face and eventually turn into an online collaboration.

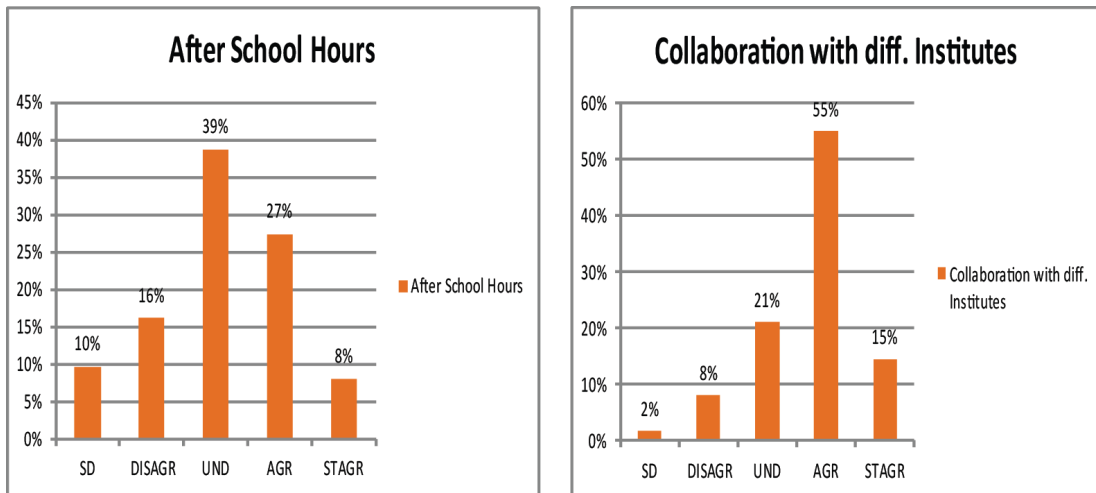


Figure 8: Willingness Commitment Analysis

Results demonstrate that students are willing to co-operate with students from different institutes reaching a peak of 55% of students that agree to co-operate. As regards to results representing commitment, students expressed a cautious approach. To measure students' commitment, students were asked if they are willing to work after school hours producing the following results; 39% of students were undecided, 27% agree and 8% strongly agree, on the other hand 16% disagree and 10% strongly disagree. Results show that most of the students are undecided as regards to commitment but they expect to co-operate with other institutes. The low response that students expressed as regards to commitment can lead to an unsuccessful collaboration. According to Tarricone & Luca, (2002, p5) a successful group must have an appropriate team composition considering skills need it for each member of the group. Exploiting the willingness that students demonstrated as regards to co-operate with different institutes and making appropriate selections might be a solution to enhance commitment.

4.2.2 Factor 2 Guidance

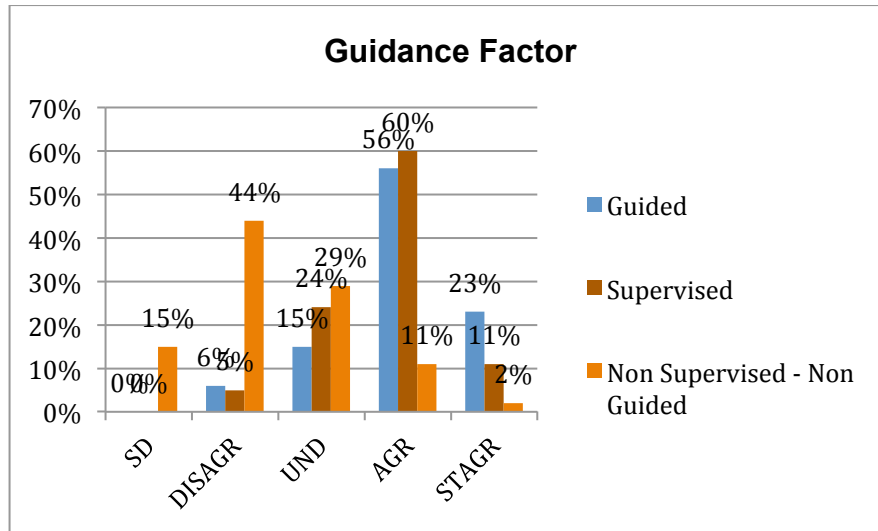


Figure 9: Guidance Analysis

Without any doubt, students expect guidance and supervision during on-line collaboration. Results show that 56% of students agree with guided collaboration and 60% of students agree with supervised collaboration following 23% strongly agree with guided collaboration and 11% strongly agree with supervised collaboration. When asking students if collaboration should not be supervised or guided, the response was 15% of the students strongly disagreed and 44% disagreed. These results reflect Bishop (2011) revealed during literature review stating that students during their studies found that prompt responses and frequent communications between lecturers and students could enhance retention during online courses. According to research results, students expect continuous guidance and supervision through frequent communication and prompt responses.

4.2.3 Factor 3 Communication

Students expect to find both synchronous and asynchronous communication during on-line collaboration and discuss issues synchronously. Results below demonstrate how students reacted when asked what type of communication they expect and how frequent communication must occur.

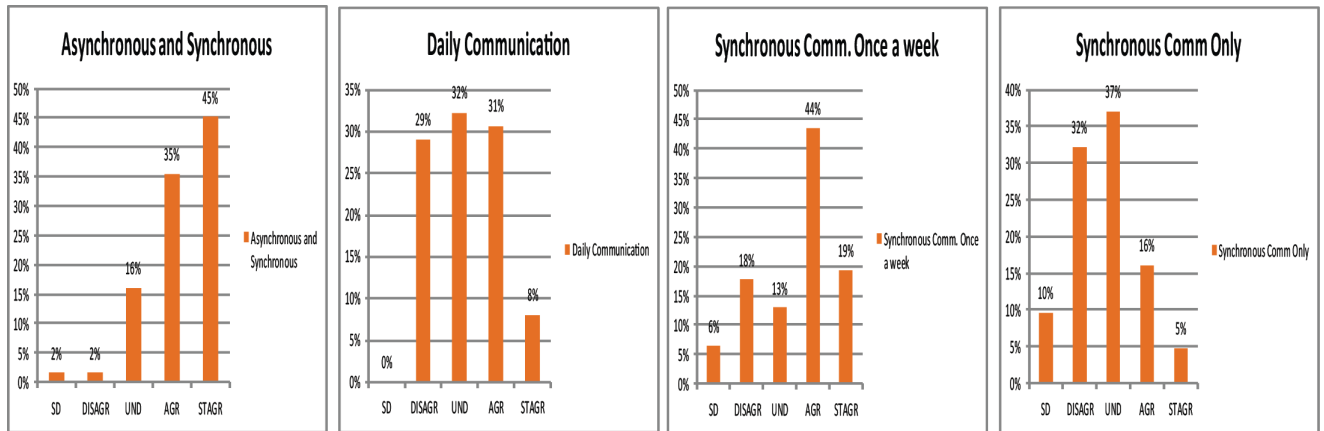


Figure 10: Communication Analysis

Asynchronous and synchronous results show a steady growth reaching a peak of 45% strongly agree going down to a lowest value of 2% strongly disagree sustaining that students expect both type of communication during online courses.

44% of the students expressed that they agree to communicate once a week and 19% strongly agree while 31% of the students agree and 8% strongly agree to communicate daily. On the other hand, 32% were undecided and 29% disagreed.

Results indicate that students expect to discuss issues synchronous although asynchronous results are relatively high. Students were asked if they prefer to solve issues using asynchronous or synchronous communication or else via email.

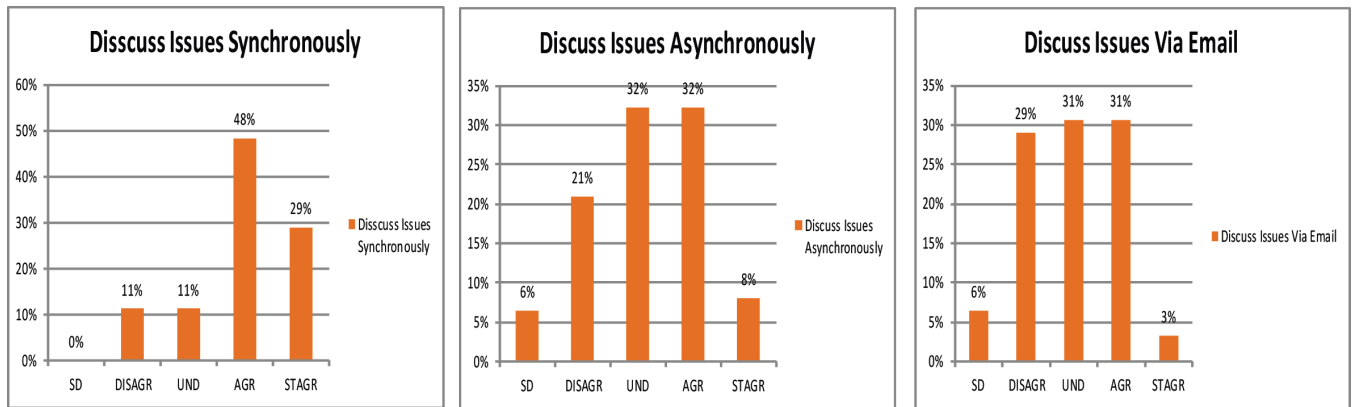


Figure 11: Communication Analysis Second Part

Results indicate that students expect to use synchronous communication to discuss issues generating 48% of the students who agrees, following with a 29% strongly agree to communicate synchronously. Asynchronous communication generated uncertainty among students demonstrating that 32% of the students are undecided to communicate asynchronously and 31% undecided to solve issues via email.

It seems that students will only communicate if there is necessity to communicate. Students' results manifest that if they are well guided and supervised they do not feel the need to communicate frequently even though considering that a high percentage of the students' population is undecided. This establishes and sustain that both synchronous and asynchronous communications are important for an on-line collaboration. Keegan (1993) declaration confirms results generated in this analyses, stating that synchronous and asynchronous media are viable means of communication for distance education allowing two-way communication. Utilizing asynchronous and synchronous communication gives students various options of communication referring to Keegan (1993) is a two way communication keeping alive two way communication is a fundamental feature to retain students during online collaboration.

4.2.4 Factor 4 Group Size

Group size evaluation consists of two categories group size and level of skills within groups. Students were asked if they prefer to work in large groups or small groups and if they prefer to participate within groups of equal skills, different skills or with peers that have higher skills. Results definitely show that students expect to work in small groups with equal skills.

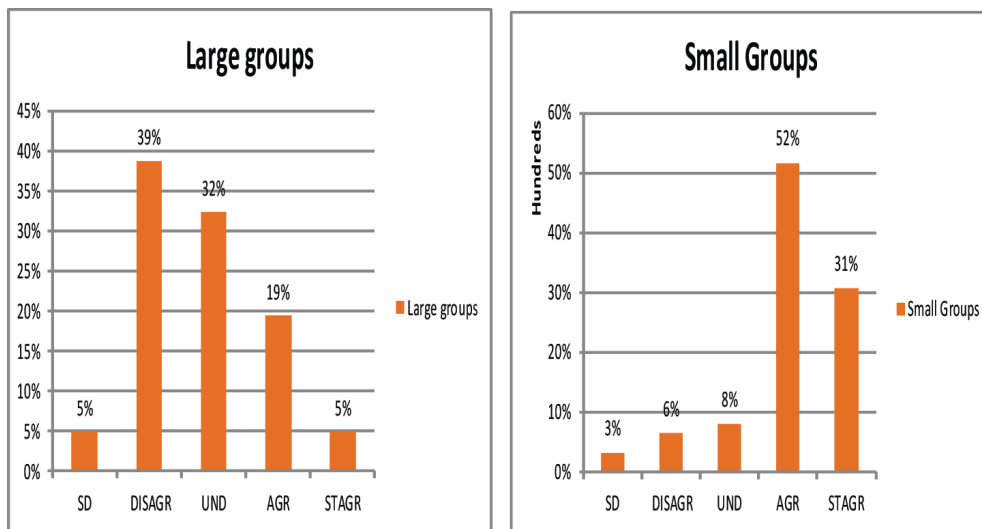


Figure 12: Group Size Analysis

Results indicate that students prefer working in small groups rather than in large groups. On the left (large groups), results show that 39% of the students disagree to work in large groups, gradually decreasing to 5% strongly agree working in large groups. On the right (small groups), show that 52% of the students agree to work in small groups supported with 31% of the students who strongly agree working in small groups. This also confirms what was revealed in the literature review stated by Hsiungtu (2004, p105) recommending that the size of a group should be limited if possible to two or three and no more than four for an effective online collaboration.

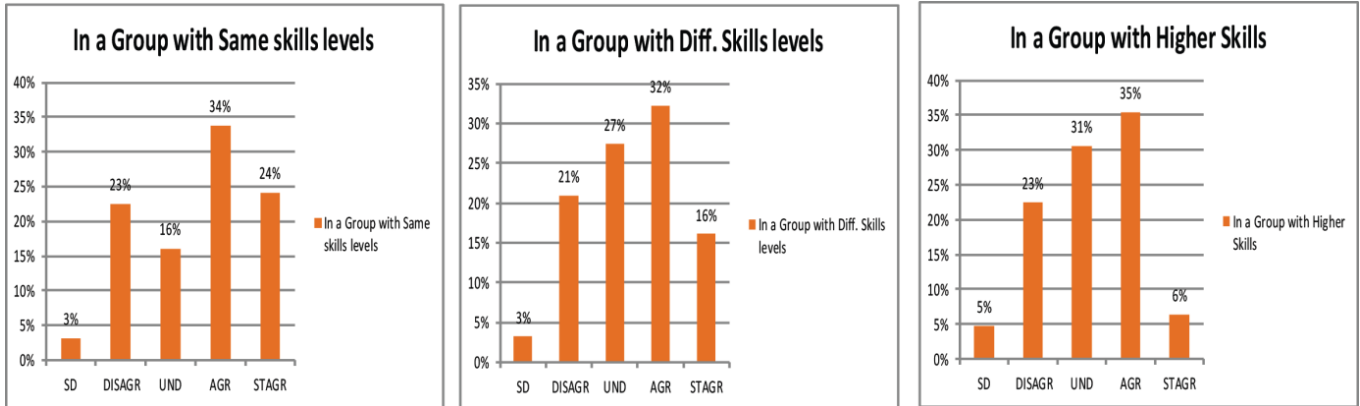


Figure 13: Group Size Analysis Second Part

As regards to skills levels the agree percentage expressed by the students is almost at the same level throughout the three questions demonstrating the following results; same skills 34%, different skills 32% and higher skills 35%. Responses differ when reading strong agree results generating the following: same skills 24%, different skills 16% and higher skills 6%, placing same skills on top of the expectations with 58% of the students expecting to work with students of equal skills. A fact that could have generated these results is fairness of evaluation. Chih-Hsiungtu, (2004, p22) states that *“learners often conceive that one grade applied to all team members is unfair because some members contribute more than others”* Students may have conceived this and therefore could have decided to work in groups with the same level of skills so that each member of the group contributes equally avoiding differences in knowledge approaching towards a fairness evaluation distributing workload equally according to their skills.

4.2.5 Factor 5 Evaluation

In this part of the survey students were asked when they expect that evaluation occur and what type of evaluation do they expect if it is summative, formative or both evaluation methods. Students expect that evaluation feedback occur before submitting the assignment and they expect both methods of evaluation.

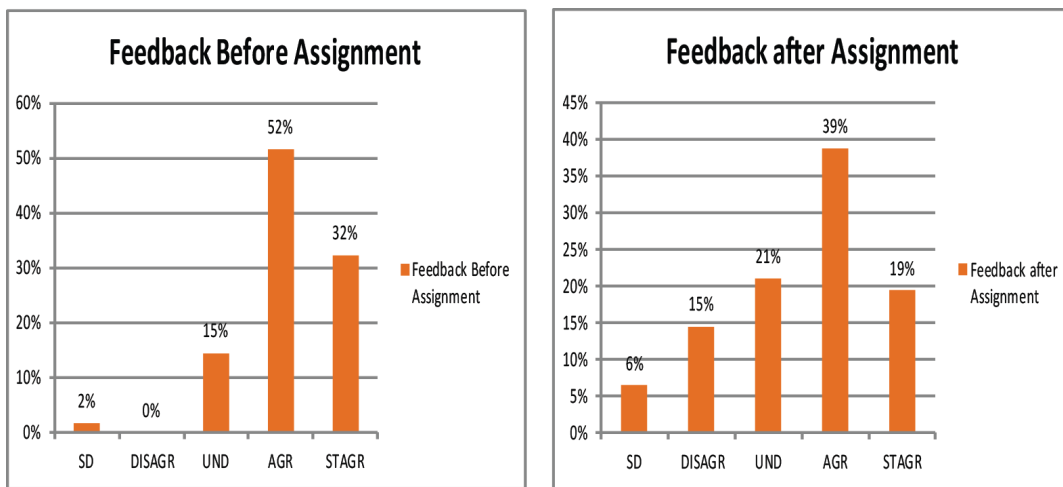


Figure 14: Evaluation and Feedback Analysis

52% of the students agree and 32% strongly agree to receive feedback before assignments are submitted. Comparing both, results it shows clearly an increment of 13% of students who agree to receive feedback before assignments, and 13% of the students who strongly agree to receive feedback before assignments. Result supports the guidance factors were students expect to be supervised and guided during collaboration. This can be related as part of the lecturer's duty delivering appropriate feedback during collaboration assistance. Meaning that students might expect that part of the supervision and or guidance should be feedback before assignments.

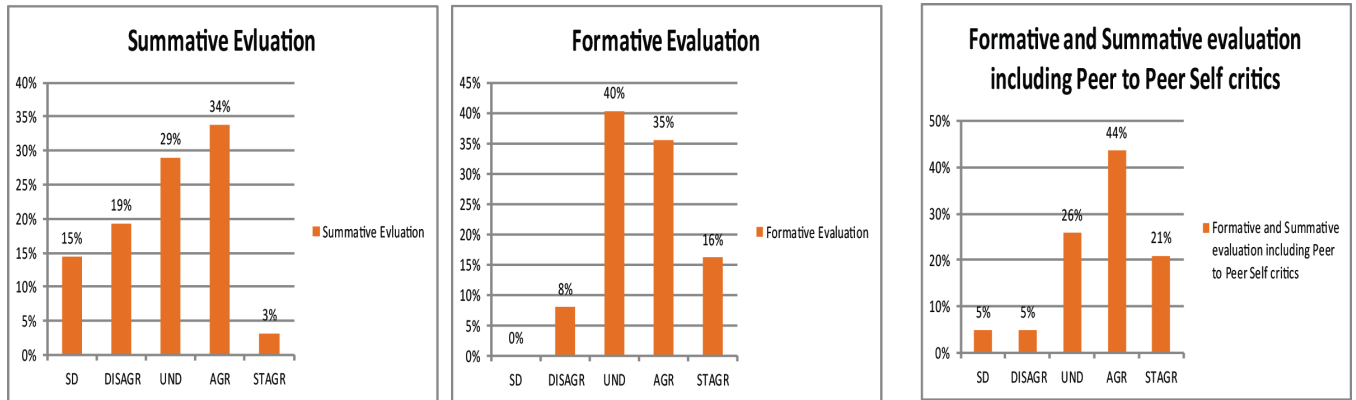


Figure 15: Evaluation Method Analysis

Comparing summative and formative evaluations result indicates that 34% of the students agree with summative evaluation and 35% agree with formative evaluation. There is a minimal difference of agreement between formative and summative, which brings to understand that students accept both methods of evaluation. Results demonstrate that 44% of students agree with both methods of evaluation supported with 21% strongly agree sustaining that students expect both methods of evaluation. This seems to manifest a sense of security among students while collaborating online. It also reflects what was revealed during the literature review by Pallof & Pratt (2007, p206) stating, *“if instructors are truly establishing a collaborative, transformative process, then formative as well as summative evaluation must be used”*. This also demonstrates that students sense a transformative process when attempting to online collaboration creating a driving force to expect both types of evaluation for their learning process.

4.2.6 Factor 6 Material Delivery

As regards to content delivery and technology, results clearly indicate that the majority of the students expect material delivery in a sequential method as demonstrated in the results below:-

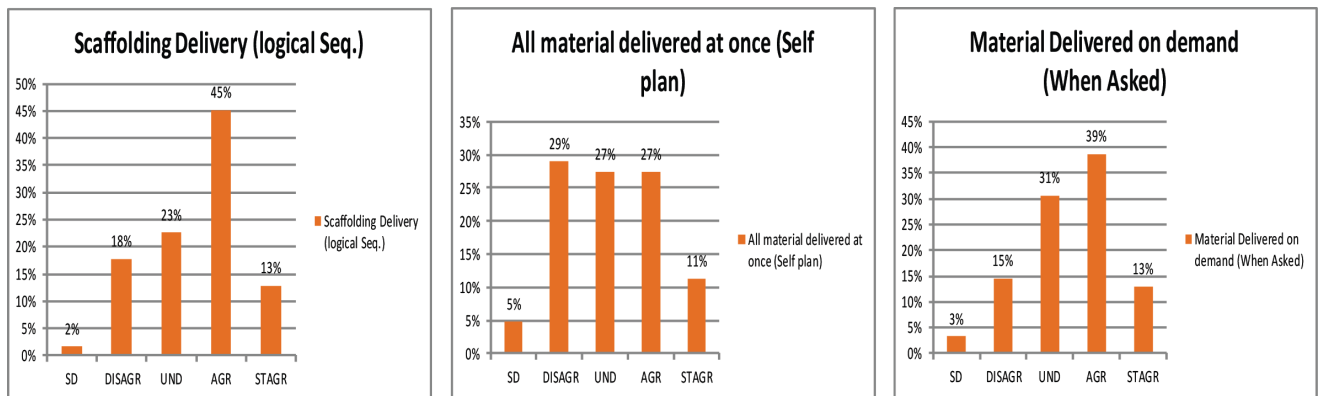


Figure 16: Course Material Deliveries Analysis

Logical sequential delivery method shows an incremental fluctuation reaching a peak of 45% of students that agree with scaffolding method, following with 13% of the students that strongly agree. It shows that the majority of the students are comfortable with sequential learning. This might be because students are coming from a sequential methodical learning support. The preference of students to learn sequentially might be the influence of previous learning methods.

Richard.M, (2002, p8) states that *“Everything required to meet the needs of sequential learners is already being done from first grade through graduate school.”* When it comes to delivering material in other methods students express a guarded approach with a minimal difference between disagree 29%, undecided 27% and 27% agree. In view of results expressed by students to use different methods of delivery, demonstrates that not all students are sequential learners

and it is important to take into consideration global learners during collaboration. According to Richard.M, (2002) global learners students are the ones who make the difference. They are the multidisciplinary researchers and systems thinkers. On demand, delivery students who represent the global learners demonstrated to be clearer on what they expect, generating incremental results starting from 3% of the students that strongly do not agree reaching a peak of 39% of the students that agree supported with 13% of the students that strongly agree. Results indicate a considerable interest from students in this method of delivery. Hanover Research Council, (2009, p3) states, “According to a recent contributor to the journal *Campus Technology*, new technologies offer a radical and refreshing alternative to the —course content delivery paradigm.” Considering that Digital tools do not have the limitations of paper-based tools, nor do classroom walls block out the world any longer, study demonstrate that students are aware of new technologies available and are willing to experiment innovative ways on how to learn. Students’ expectations related to interactive technologies clearly demonstrate that students expect to make use of all the technologies available to access course material. Students expect not only to access online course material via audio and visual technology but also to be able to download course material.

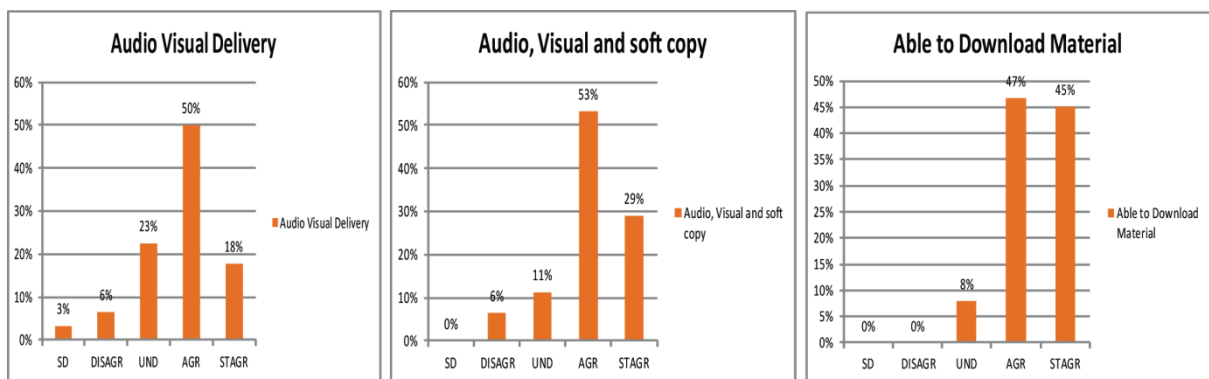


Figure 17: Course Communication Technologies Analysis

When comparing audio visual and soft copy both results reach a peak of 50% and 53% of the students that agree to use both technologies. The change occurred when students were asked if they want to download course material, results demonstrate a consensus of nearly the whole population generating a result of 47% agree and 45% strongly agree to download course material. This sustains that whether if it is audio, visual or softcopy students expect to be able to download course material.

These results reflects what Palloff & Pratt, (2007,p15) stated, *“regardless of how the course is delivered all forms of technology needs to be considered”*, students actually are expecting all forms of technology available. As revealed in the literature review Frankola, (2001) states the importance of making technology accessible to students for better proficiency collaboration. One of the SEOLS factors is to measure students expectations as regards to course delivery since most of the students drop out due to poor course design. Results demonstrate that students expect to find organized and clear instructions during online collaboration including appropriate technologies.

Chapter 5: Comparative Analysis

5.1 Introduction

Comparative analysis derived from the de Mooij & Hofstede, (2010) Hofstede model revealed during literature review (Models Adaptations). Comparisons are divided in four different variables, gender, age, experience and course subject. All data collected will present variances expected by students of each group in relation to online collaboration. The results are to demonstrate if gender, age gap, experience and different course subjects can effect collaboration between students. Comparisons are discussed on factors previously examined in the general analysis section. Variables are described in the subsequent structure; compare students' age that ranges from 19 to 20 years old with students from 21 to 35 years. Compare students that have experience as regards to online

collaboration with students that do not have experience of online collaboration. Compare interactive media students with software students as well as male and female students.

5.2 Factor 1 Willingness

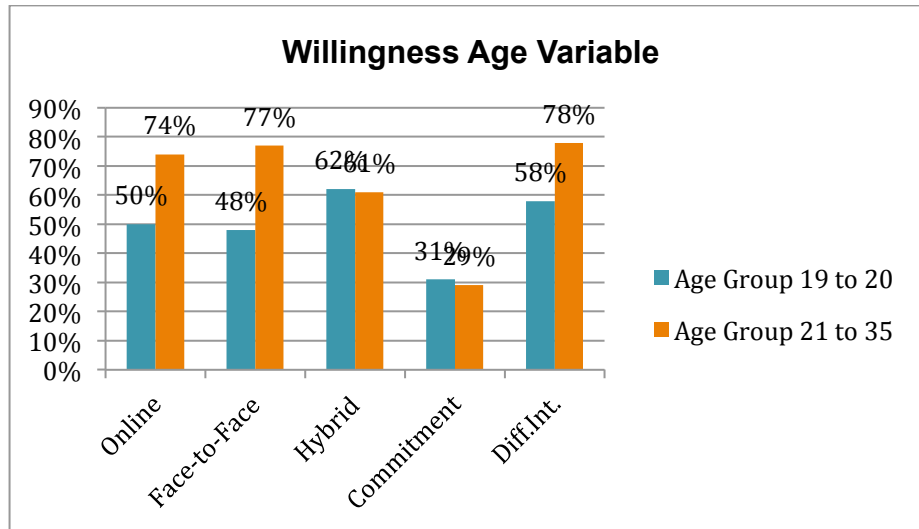


Figure 18: Willingness Age Variables Analysis

Results demonstrate that 74% of students' age between 21 to 35 claims that they are willing to collaborate online and 50% of students age 19 to 20 are willing to participate online producing a margin of 24% between the two age groups. This sustains that students age 21 to 35 are more willing to participate during online collaboration, while students age 19 to 20 are undecided. It seems that students with more experience tend to be more independent and motivated to learn. A reason that may have lead elder students to express more willingness than younger students, might be based on the study of Robyn, (2009) stating that, older participants have high levels of motivation due to interest in learning and thus participate well (Hoskins & van Hoof 2005). The difference of willingness demonstrated by elder students could be that elder students relate collaboration directly with job opportunity prospects and therefore enhancing interest in learning. As regards to other methods of collaboration, differences are minimal. Both age groups express a preference to use hybrid method. As regards to collaboration between different institutes, students age 21 to 35 definitely agree to collaborate generating a result of 78%, while students age 19 to 20 once again express their uncertainty when compared with students' age group 21 to 35, generating a result of 58% producing a margin of 20% less than students age 21 to 35.

Another difference linked to maturity is socialization. It seems that younger students prefer to collaborate with peers of the same institute while elder students are more open to exchange their skills with other institutes. Most of the elder students already have working experience while younger students most of them do not have working experience. Working experience may have changed the point of view of how students approach teamwork and co-operation understanding the importance to collaborate with different sectors. As regards to commitment both express the same results generating an average of 62% of the students undecided if to work after school hours or not, indicating that students expect to collaborate within school hours.

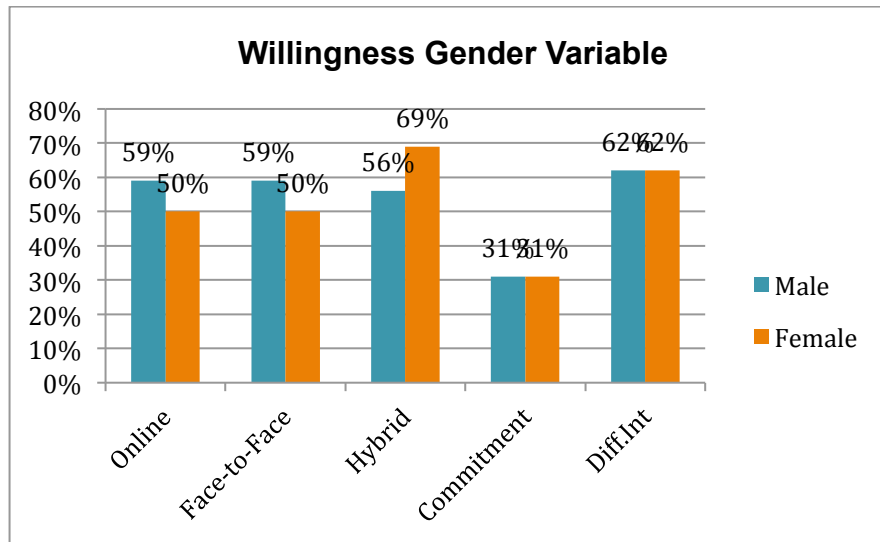


Figure 19: Willingness Factor Gender Variables Analysis

Genders variables did not demonstrate any significant differences. Both females and males agree and are willing to collaborate, both express hesitation as regards to commitment and both are willing to collaborate with different institutes. Difference occurred when measuring students' expectations in relation to hybrid collaboration. Quantitative research analysis revealed that the majority of the students expect to collaborate using a hybrid method. In the case of Males, the margin of difference between faces to face and online is null this sustains face-to-face and hybrid method collaboration have same level of expectation among Males students. Females are more determined to work in a hybrid environment producing a result of 69% who expect to collaborate via a hybrid method. Even though the difference is, minimal results demonstrate that males are more willing to collaborate online than females. According to Bohannon, (2014) "...collaborator tends to be male, even when there are female full professors available, according to a new study". This can also occur due to different learning style that females have when compared with males according to Robyn, (2009) stating "...Differences in learning styles and social circumstances are also likely to be associated with gender". As results demonstrates females are more determined to work in hybrid environment, a hybrid environment gives the

opportunity to students to interact with the teacher face-to-face but can also help students to master the subject on their own leading to a individualism behavior.

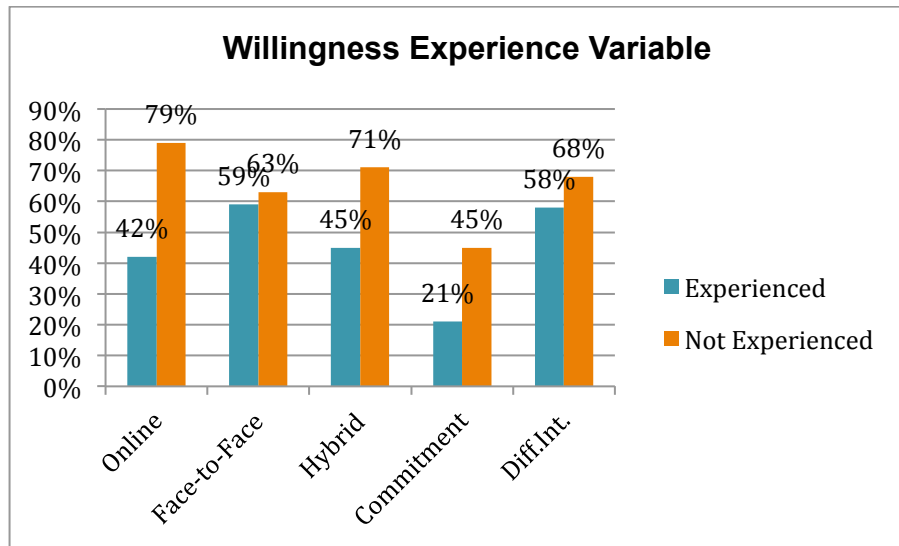


Figure 20: Willingness Factor Experience Variables Analysis

Comparing experiences generates similar results in parallel with overall analysis. Both experienced and non-experienced students demonstrate that they are willing to collaborate and co-operate, both express their hesitation as regards to commitment and both are willing to collaborate with different institutes. Even though results sustain similarities, experienced students demonstrate less willingness to collaborate when compared with inexperienced students. This can be noticed in three different circumstances, which are, analyzing level of willingness to participate in an online collaboration, face-to-face collaboration, hybrid collaboration and online collaboration. 79% of inexperienced students responded that they are willing to collaborate online, while experienced students respondent with an average of 50% that they are willing to collaborate online, generating a margin of 15% more willingness on behalf of inexperienced students sustaining that inexperienced students are more keen to collaborate than experienced students. Inexperienced students do not have any knowledge of online collaboration while experienced students do have. Students experiencing online collaboration seem to be not satisfied with online

collaboration. This might be due to lack of face-to-face interaction. A study conducted in New Zealand Secondary School by Parks, et al.,(2011, p15) states that *“Most students expressed their reluctance to use the online forums and reported that they prefer face-to-face communication”* . First time online students expressed this statement. It seems that experienced students at MCAST are of the same opinion and prefer to use a hybrid method expecting face-to-face interaction during collaboration as well as online collaboration.

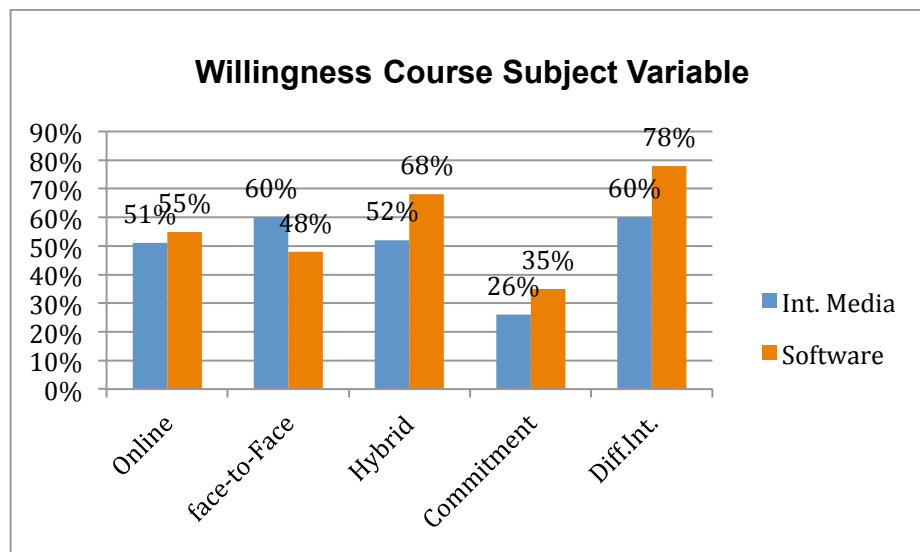


Figure 21: Willingness Factor Course Subject Variables Analysis

Results demonstrate that software students are slightly more willing to collaborate online than interactive media students are. Results state that 55% of software students are willing to collaborate online while 51% of interactive media students are willing to collaborate online, generating a discrepancy of 4%. This situation may occur due to the use of technology that students utilize. For example, software students are more computer oriented than art and design students and the familiarity with IT technology may stimulate software students more than art a design students to make use of online technology for collaboration. A research conducted by European Schoolnet, (2006, p31) revealed that, *“Nordic teachers feel that dialogue and teamwork between*

students is greater when they use ICT for project work". Sustaining that students and teachers that make regular use of ICT are more willing to collaborate with each other. Other differences between interactive media students and software students are level of commitment and collaboration with different institutes. Level of commitment overall always demonstrated a high percentage of students that are undecided if to collaborate after school hours or not. Software students still confirm their hesitation but interactive students seem to be more assertive claiming that 42% do not agree to collaborate after school hours against 26% that agree and 32% that are undecided. Both software and interactive media students are willing to collaborate with different institutes claiming 78% are willing to collaborate with different institutes, while interactive media students claims 60% that agree to collaborate with different institutes.

5.2.1 Factor 2 Guidance

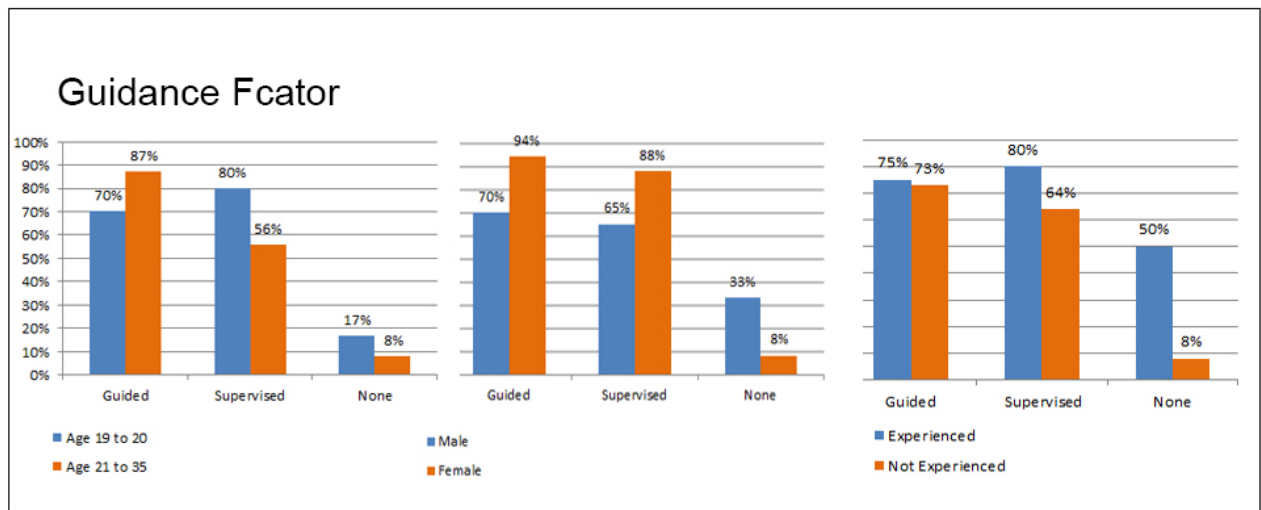


Figure 22: Guidance Factor Variables Analysis

Overall students expect guidance and supervision during collaboration, despite the results there are differences comparing genders and experience and inexperienced groups as regards to guidance and supervision. Results sustain that females are more determined in their decision claiming 94% expect guidance and 88% expect supervision, while 50% of experienced students

consider collaboration without supervision and guidance. Guidance results demonstrate that experience students tend to accept collaboration with minimal support while inexperienced students expect to find full support together with females. It seems that experienced students have more self-confidence as regards to online supervision and guidance; this might be due to self-confidence gained through previous experience during online collaboration. Despite all, results show that the majority of students expect to find guidance and supervision this seems to make them feel safer. The fact that students expect supervision and guidance links directly to communication and feedback as well as a matter of relationship. According to Queen’s University, (2010) research, students expect that an experienced supervisor is also a good communicator and timely feedback stimulates students’ motivation. The following results related to communication sustain the study made by Queen’s university. Students may have indirectly perceived that guidance and supervision during online collaboration secures their point of reference.

5.2.2 Factor 3 Communication

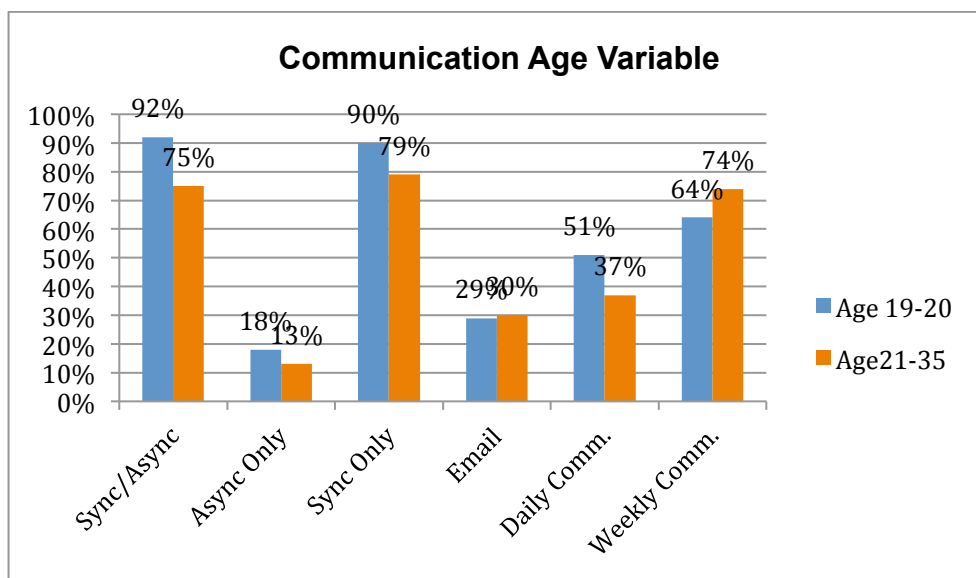


Figure 23: Communication Factor Age Variables Analysis

Both age groups expect asynchronous and synchronous communication. Students age group 19 to 20 generated 33% more than students of age group 21 to 35. As regards to frequency of communication, results demonstrate a consensus between both groups with the majority of the students expecting to communicate weekly to daily communication. Solving issues via email results demonstrated that only few students between both groups expect to communicate issues via email. Results demonstrate that students expect to communicate when difficulties occur, expecting both type of communication synchronous and asynchronous. Lightfoot, (year NA, p6) stated, “*Communication with other students might be synchronous or it might be asynchronous, depending upon the individual student’s habits or the convenience of technology at the moment*”. This demonstrates that if students have difficulties and the necessary technology they will make use of it irrelevant it is synchronous or asynchronous. In the case of this study participants are aware of communication technology and demonstrated that they will use it whenever is convenient.

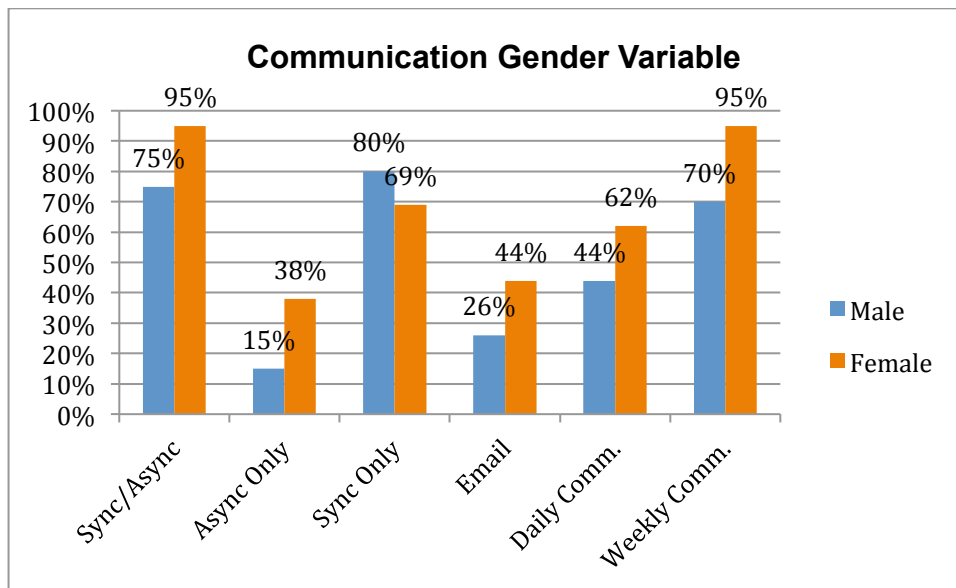


Figure 24: Communication Factor Gender Variables Analysis

Both females and males students expect asynchronous and synchronous communication during online collaboration and both expect to solve issues synchronously. As regards to solving issues via email, female students tend to agree more than males even though results are low. The majority of male students disagree to use email-solving issues during online collaboration. When it comes to frequency of communication both groups expect to communicate on weekly basis. Females show more assertiveness generating 95% of females expecting to communicate weekly against 70% of males. Results demonstrate that females students are more determined in their decisions as regards to type of communication and frequency of communication, affirming their expectations with high results. Similar results were also revealed by Chou, (2002, p7) stating that *“Overall, female participants consistently sent more SE-oriented messages in both communication modes”*.

Overall results indicate that both genders have same expectations. Results indicate clearly that an online collaboration system must contain various communication technologies on weekly basis putting apart email communication. Even though email has not high expectations among students, usually they use it as last resort. It is wise to consider including email communication in a collaboration system. In accordance with students results an effective online system should have all type of communication technologies considering email communication even though results show that is not expected form students.

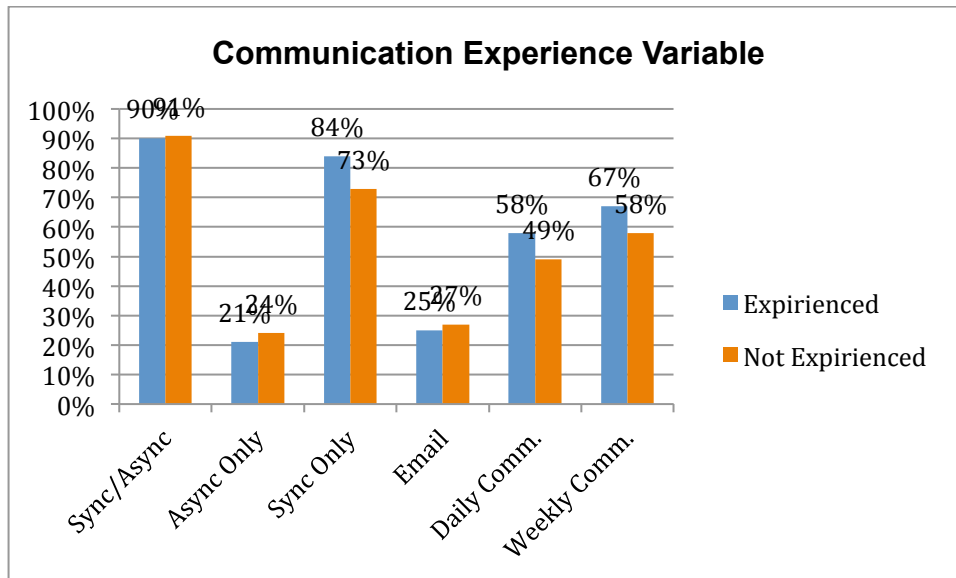


Figure 25: Communication Factor Experience Variables Analysis

Experienced and inexperienced students almost share the same expectations as regards to communication factor. Both experienced and inexperienced students expect synchronous and asynchronous communication on daily basis as well as weekly basis. Students expect solving issues exploiting synchronous and asynchronous communication. Results sustain that experience does not affect the way of how students expect to communicate during online collaboration.

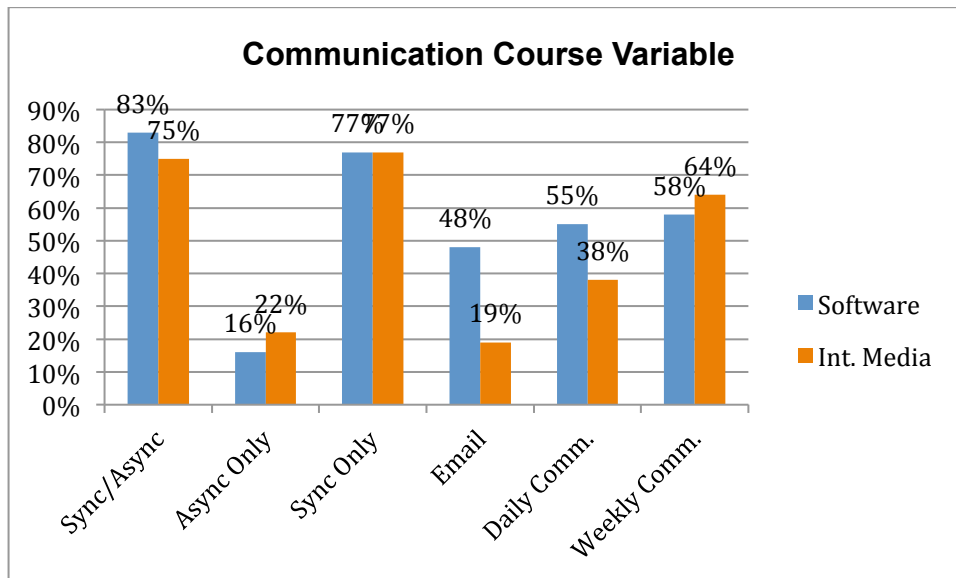


Figure 26: Communication Factor Course Subject Variables Analysis

Interactive media students and software students both expect asynchronous and synchronous communication and both expect to discuss issues synchronous. Variations between the two groups occur when measuring email communication and daily communication. Software students tend to expect email communication and daily communication. Interactive media students' expectations correspond with the rest of the other groups that is weekly communication and a low expectation as regards to email communication. Results demonstrate that students expect to find both methods of communication asynchronous and synchronous and frequently. Email communication generated some variances but still with the majority of the students expressing low expectations as regards to email communication during online collaboration. Results demonstrate doubts among students to use email as a communication tool. The denial of using email as a communication tool might be coming from the lack of communication on behalf of the lecturer. Emails are usually queued and replied accordingly, if a lecturer has a busy day it might take long before replying back and this might be

perceived by students resort to a more effective communication tool such a chats or discussion boards.

5.2.3 Factor 4 Group Size

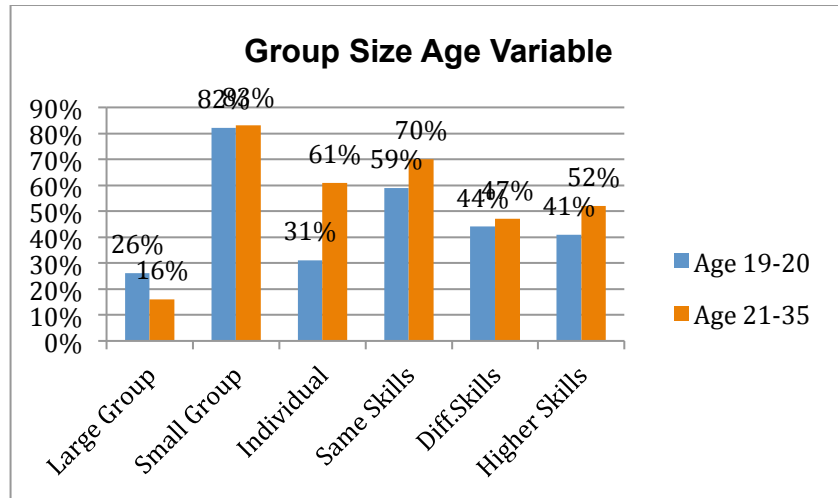


Figure 27: Group Size Factor Age Variables Analysis

General analysis revealed that 83% of the whole population when adding agree and strongly agree expects to work in small groups, comparing both age groups claim an average of 82% expecting to work in small groups. As regards to skills, results demonstrate a linear distribution with a preference to work in same level skills. This analysis demonstrates that age gap did not produce any significant differences except when it comes to individual working where 60% of elder students expressed a significant interest in working individually. It might be that elder students are more focused on the outer world meaning to collaborate for career purposes rather the collaborating for an assignment, creating an objective mismatch within group work expectation between elder students and younger students.

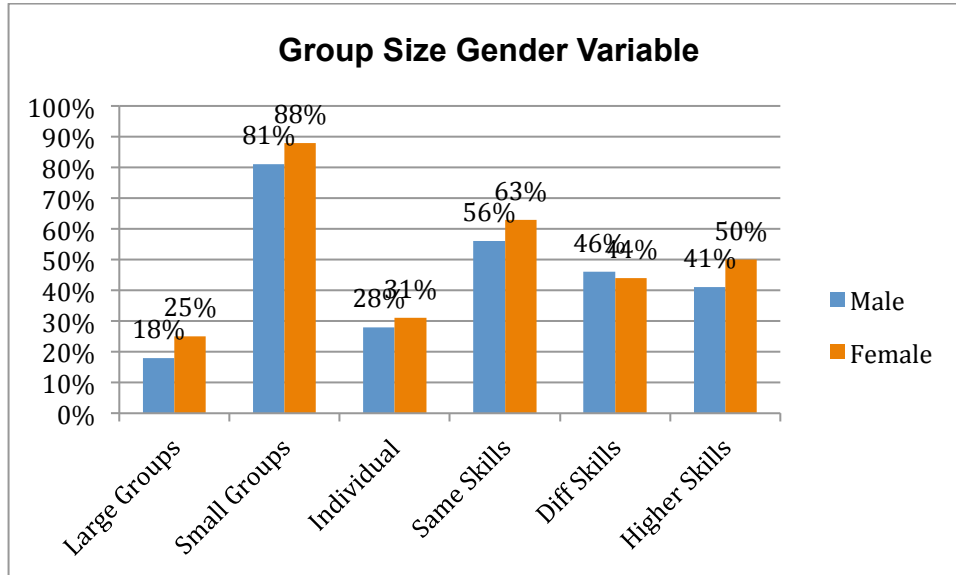


Figure 28: Group Size Factor Gender variables Analysis

An overall average of 85% expects to work in small groups with equal skilled students. Results show that male and female students have same expectations in both aspects group size and skills level. As regards to individualism, both groups express a low expectation to work individually. Results demonstrate that online collaboration related to group size and skills among genders have same expectations in parallel with the general overview statistics previously examined.

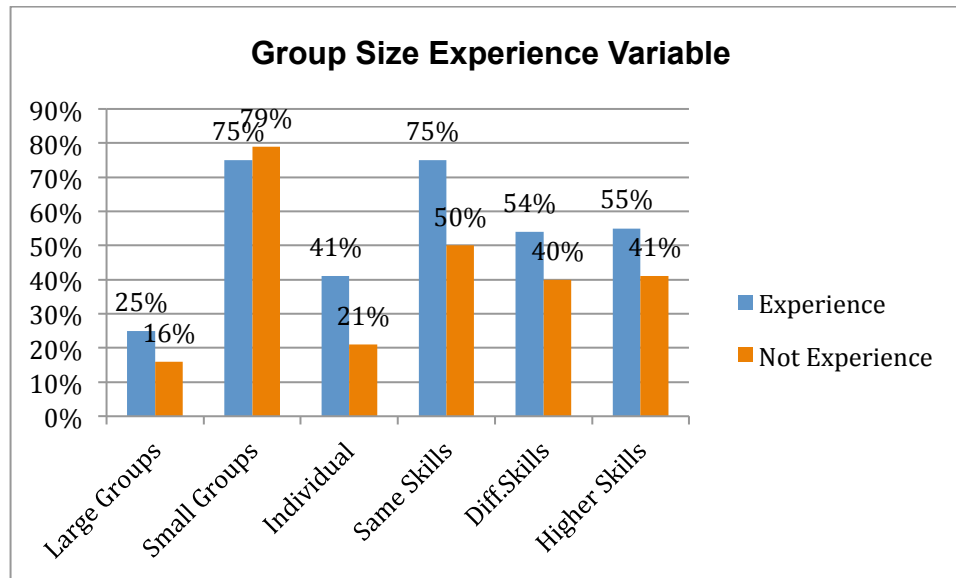


Figure 29: Group Size Factor Experience Variables Analysis

Students' expectations clearly show that both inexperienced and experienced students expect to work in small groups. As regards to skills levels inexperience students expressed evenly distributed results between the three options, with a margin of an average of 10% preferring to work with students of equal skilled students. Examining individualism expectations, it shows that 41% experienced students expect to work individually. Results demonstrate that level of expectations between the two groups is almost similar generating small differences in certain areas. A significant difference occurred measuring individualism level of expectation, where experienced students demonstrated a certain interest to work on individual basis.

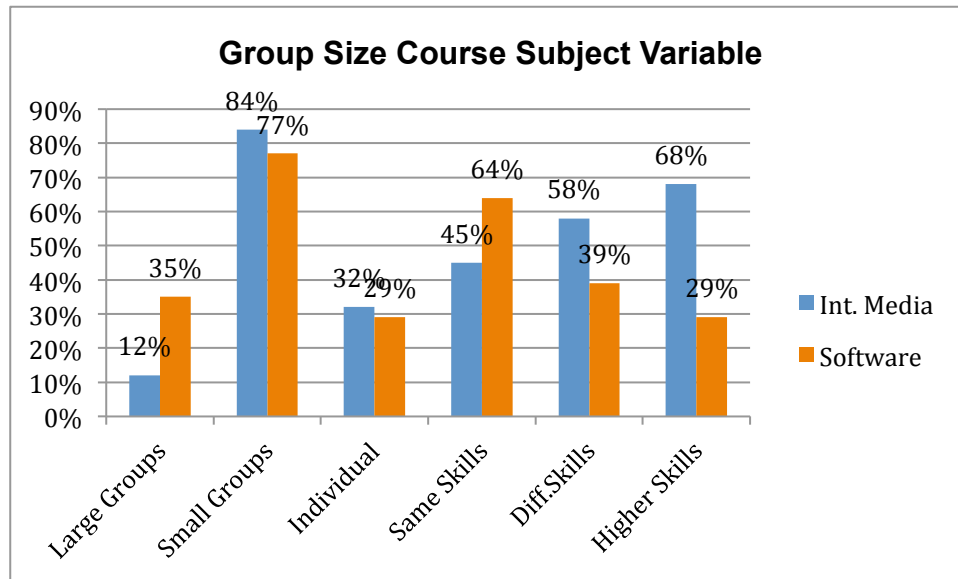


Figure 30: Group Size Factor Course Subject Variables Analysis

Interactive media students and software students both expect to work in small groups. Results generated 84% of interactive media students who prefer to work in small groups and 77% of software students who prefer to work in small groups. Variations between Interactive media students and software students occur when measuring skills level. Software students' expectations are equivalent to the rest of the groups expecting to work with same skills level. Interactive media students expect to work with students that have higher-level skills. The cause might be because digital art students experience work group during their course at the Art and Design Institute while software students complete their assignments individually. This situation might have put digital art students in position to realize that working with higher skills students can be of an advantage as a matter of leadership meaning someone within the group that leads the group. Lack of group work experience between software students might lead towards a co-operation orientation rather than collaboration that is distributing work equally among the group rather than each member of the group is responsible for a particular task. Once again, results sustain that all groups expect to work in small

groups, with some divergences as regards to skills level related to the interactive media group. Results also demonstrated a tendency of individualistic working among experienced students and age group 21 to 35 years. From the individual aspect, experienced and elder students demonstrate their self-confidence expecting to work on their own rather than participating with a group. This might occur because mature students are more motivated individually to reach their own goals (usually finding a job) rather than working in an group work that might disrupt them on reaching their aims.

5.2.4 Factor 5 Evaluation

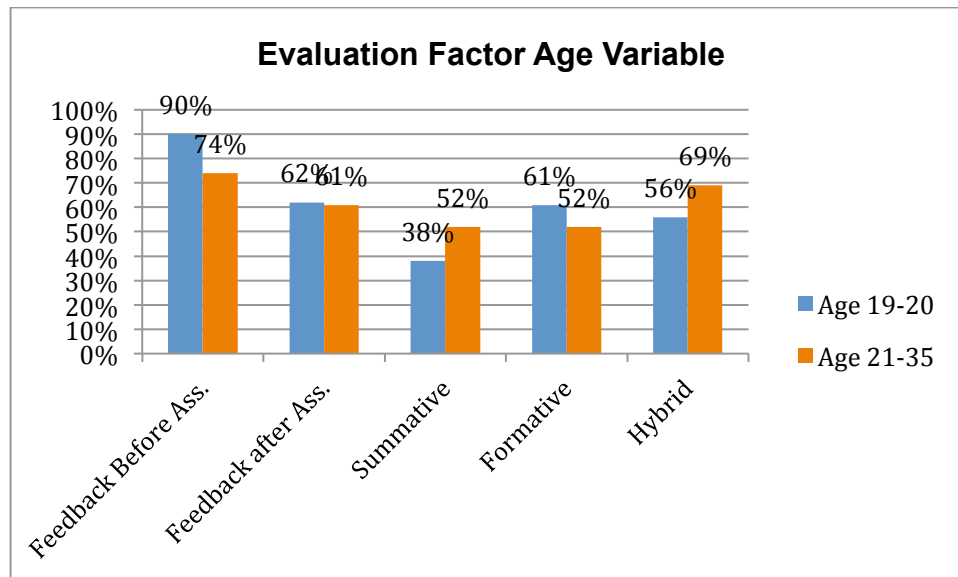


Figure 31: Evaluation Factor Age Variables analysis

Both age groups expect to receive feedback before assignment more than receiving feedback after assignment even though receiving feedback after assignment has a relatively high expectation. It seems that receiving feedback before an assignment helps students to modify and enhance their assignment projects stimulating their participation during collaboration. Reviewing project assignments involves students and teachers to interact encouraging

collaboration. During her study Spiller,(2009,p3) discovered that *“literature suggests that a part of the problem is that teachers (and students) see feedback in isolation from other aspects of the teaching and learning process, and consider feedback to be primarily a teacher-owned endeavor (Taras, 2003)”*. Study revealed that feedback before assignment might avoid isolation and turning reviews into an opportunity of collaboration between students and lecturer. Age group 21 to 35 are more assertive in their expectations in fact 90% expect to receive feedback before assignment against the 74% age group 19 to 20. When it comes to method of evaluation both age groups prefer both methods but students age 19 to 20 tend to expect more a formative approach rather than summative. Age group 19 to 20 demonstrate hesitation in taking a definite decision of what type of evaluation to use. Age groups 21 to 35 do not hesitate to show their preferences generating the right indications according to method of evaluation and feedback occurrence.

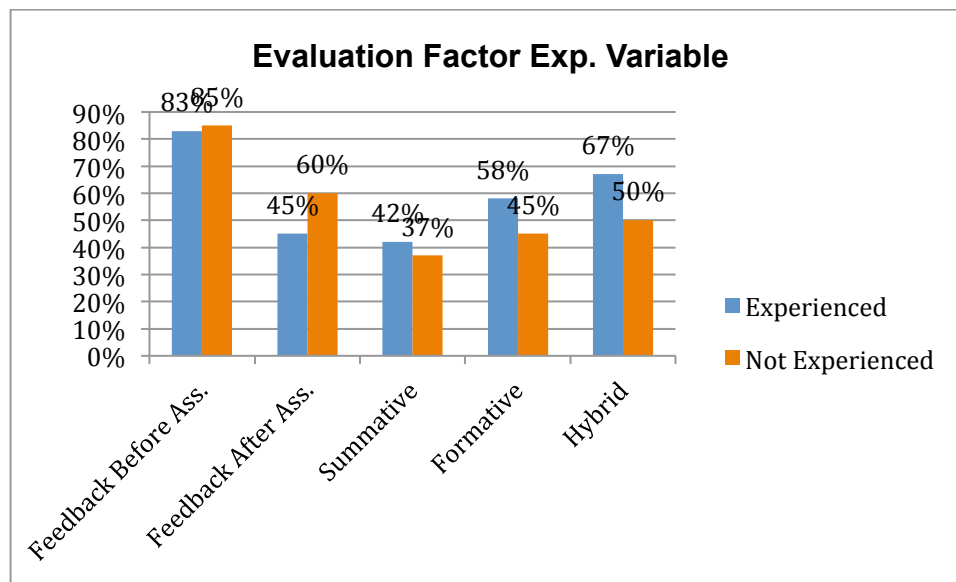


Figure 32: Evaluation Factor Experience Variables Analysis

Experienced and inexperienced groups demonstrate equal level of expectations on almost all the evaluation methods and feedback factor. Both expect to receive feedback before assignment with an average of 84%. Inexperienced students demonstrate hesitation as regards to method of evaluation with a subtle preference of 50% expecting both methods of evaluation. Experienced students show more determination in their decision with 58% expecting formative evaluation and 67% both methods. Results demonstrate that even in this case both methods of evaluation are expected and feedback expected to occur before submitting the assignment noticing that experienced students are more determined in their decisions.

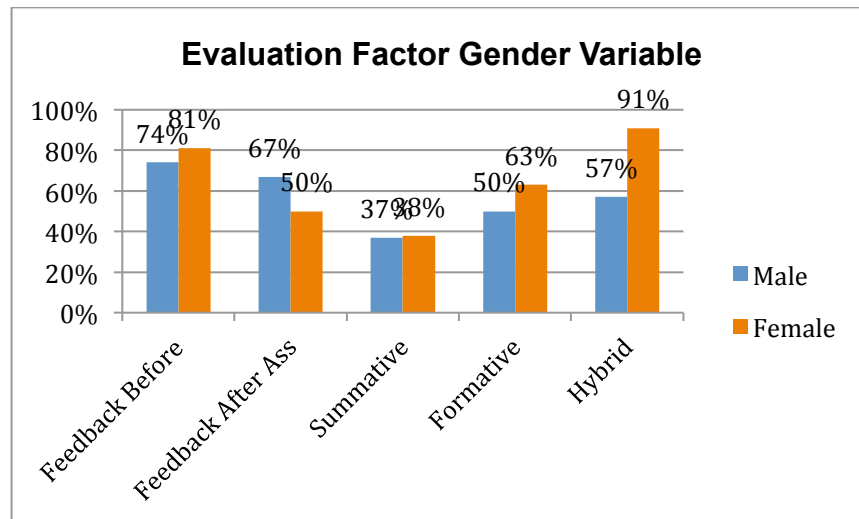


Figure 33: Evaluation Factor Gender Variables Analysis

Both Males and Females students agree to receive feedback before assignments, differences of expression occur measuring methods of evaluations. Female students expect both types of evaluation but with a considerable interest in formative evaluation. Results shows that 63% of female students expect formative evaluation and 88% of female students expect both type of evaluation. Male students demonstrate more balanced outcomes generating 50% expect formative evaluation and 57% both methods.

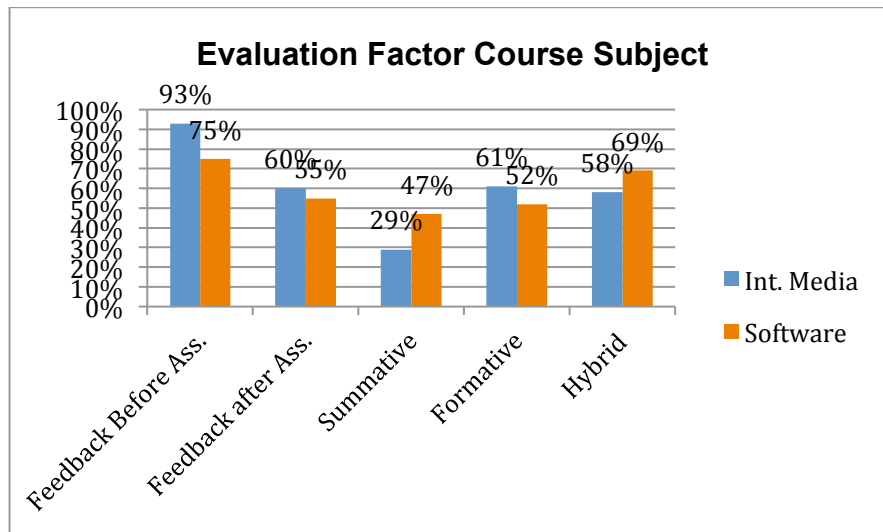


Figure 34: Evaluation Factor Course Subject Variables Analysis

Interactive media and software students sustain previous results as regards feedback before assignment demonstrating that they expect to receive feedback before assignment. Results demonstrate 61% of Interactive media students expect to be formative evaluated and 56% to use both methods while 52% of software students expect to be formative evaluated and 69% to use both methods. Results shows that even though the two groups of students have different learning styles approach (interactive media visual learning style and software students abstract learning style) both expect hybrid method of evaluation with a tendency towards formative evaluation.

5.2.5 Factor 6 Delivery and Technology

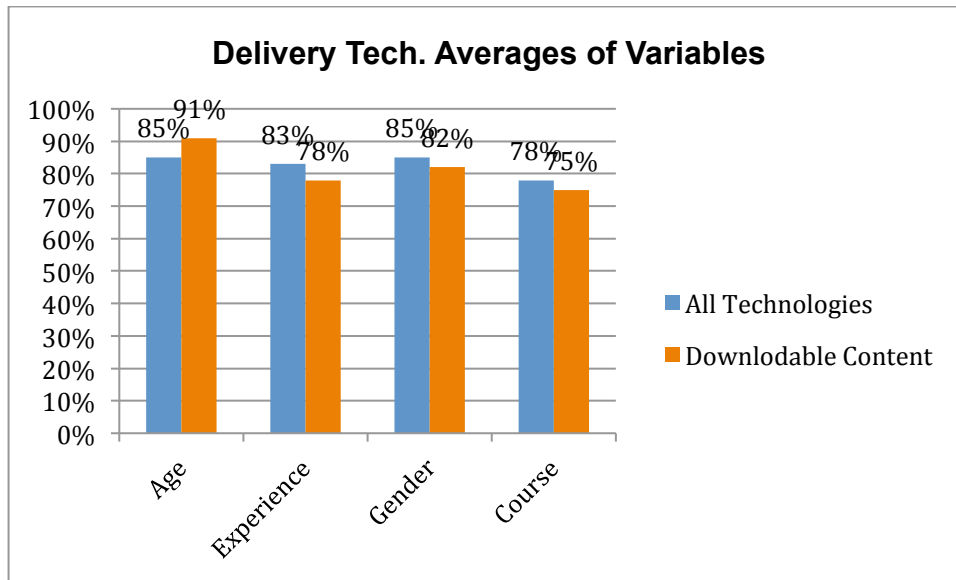


Figure 35: Delivery Technology Variables Averages Analysis

Factor 6 measures two aspects of students' expectations; method of material delivery and technology utilized to delivery material. Results generated equivalence output among all groups irrelevant the identity variables between each group, especially on the technology factor. Measuring technology factor generated a consensus between all groups related to audiovisual, softcopy and downloadable material. Age group generated an average of 85% for all technologies and 91% for downloadable materials. Experience group generated an average of 83% for all technologies and 78% for downloadable materials. Gender group results show an average of 85% all technologies expected and 82% expect content material to be downloadable. Course subject group also expect all technologies to be used generating an average of 78% for all technologies and 75% expect material downloadable. Students expect to find a full interactive environment as regards to content material delivery but most of all they expect to download material. Downloading material was a predominant requirement this might be because when students own the content material they can master it and follow instructions whenever they want without the necessity to

be online as well as printing content material. Each student has his own way how to learn some learn better via videos and others reading content material. There are slow learners and others are faster. Access of mix technologies gives the student the opportunity to work at his own pace facilitating his own way of learning. Mendenhall,(2014) for the Chronicle of Higher Education. Sustains the theory that a mix of technologies can be a key for students to learn at their own pace based on their learning style during online collaboration.

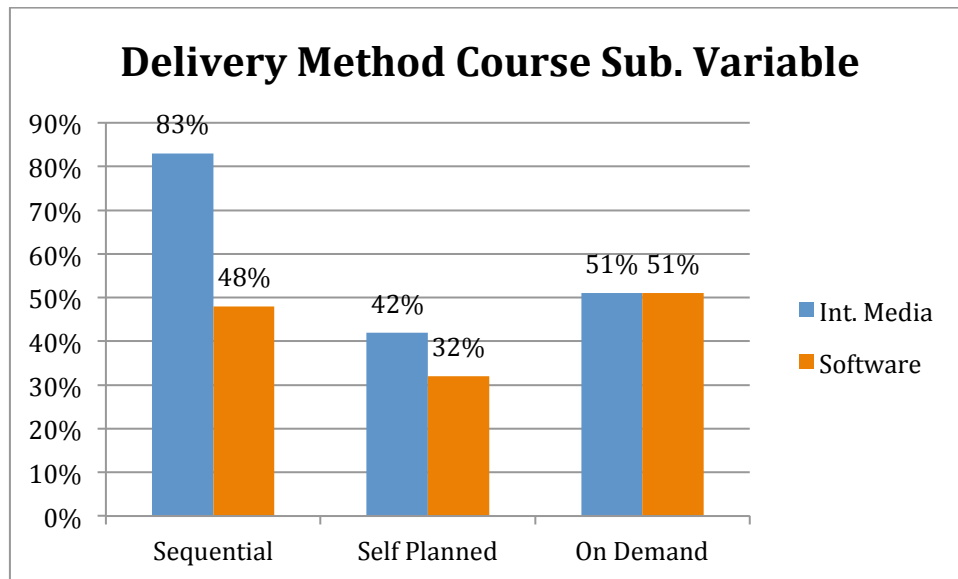


Figure 36: Delivery Methods Factor Variables Analysis

As regards to delivery methods all groups expect to receive a sequential delivery with an exception for one variant the course subject group between interactive media students and software students. Results show that 48% of software students expect sequential course delivery, which is considerable below the average when compared with other groups that produced an average of 71%. The tendency of software students is to prefer course delivery on demand with an expectation level of 51%. The differences generated by software students may occur due to learning abstract style. This is sustained through a study made by the University of Arkansas that according to Thompson, et al,(2002) Abstract

random individuals prefer order that is nonlinear, harmonious, and non-traditional (Gregorc, 1982a).

5.3 Discussion of Analysis

Utilizing SEOLS factors to define students' expectations linked to EDUQUAL model, students generated the following results. According to analysis results, students' expectations sustain clearly that collaboration should not happen exclusively on-line but also face to face, within small groups with same skills, supported with appropriate guidance and supervision through an appropriate evaluation covering summative as well as formative assessments. All communication technology are to be exploited and accessible for download.

When comparing expectations between students' variables, results demonstrated similar outcomes as generated in the general overview the few differences are related to individualism, age and experience.

Students brought forward the following expectations when associated to SEOLS and EDUQUAL models:-

Tangibility and **Responsiveness** relate to delivery and technology expectations. Students expect all possibilities of technology and a sequential delivery method, with the exception of software students that expect various types of delivery methods with a tendency for on demand delivery content. Students expect that content material during online collaboration exploits audio, visual technology and be able to download material including audio and visual content.

Literature review revealed that, Frankola, (2001) states the importance of making technology accessible as possible to online students dedicating time to teach them the technology they will use give them time to experiment and minimize technology difficulties as possible. Students expect to find various interactive technologies during online collaboration and be able to download all material

available. The inclusion of various technologies it is important not only to facilitate students' accessibility for course content but also helps each student to learn with his own way at his own pace.

Reliability links to guidance factor understanding if students expect support from lecturers during online collaboration. Students demonstrated that they definitely expect guidance and supervision during online collaboration. Experienced students tend to collaborate expecting minimum guidance and supervision. Students expect to find a point of reference during online collaboration based on guidance and supervision as well as a constant frequent communication.

As stated by Bishop, (2011) prompt responses enhance retention. A continuous guidance and supervision is necessary to retain a strong level of stimulation during online collaboration. Students with previous online experience tend to be more self-confident expecting less attention as regards to guidance and supervision. Is not advisable to underestimate students' presumption because it can generate a discourage situation, due to the fact that the lecturer may reduce his supervision attention assuming that all experienced students need less supervision and this is not always the case. A constant guidance and supervision may retain online collaboration offering support in a reasonable time.

Assurance is measured through evaluation and feedback expected by students. In these circumstances, students expect feedback before submitting their assignment even though feedback after assignment generated respectful results. This evidence sustains that feedback has to occur on both situations before and after assignment submission. Feedback before and after assignment, both have different influences on students reactions. The feedback event directly links with the factor of guidance and supervision as well as that of communication. Combining the two elements together will produce an effective feedback. It was revealed during analysis by Spiller, (2009,p3) that feedback is primarily owned by teacher and using feedback in an appropriate way can be used to enhance and stimulate collaboration between lecturers and students.

Students expect to utilize both methods of evaluation formative and summative with a tendency towards formative evaluation. Inexperienced students and students' age group 19 to 20 demonstrated uncertainty as regards evaluation expectations but still with a slight preference to use a hybrid evaluation method. The use of both method of evaluation was revealed in literature review by Pallof & Pratt (2007,p206) sustaining that to establish a strong collaborative an transformative process both methods of evaluation must be used. Changing from face-to-face method into an online or hybrid collaborative method is a transformation not only as regards to delivery method but affects a holistic learning method. This study-discovered evidence sustained with appropriate literature review, that students have different ways of leaning. Different ways of learning brings also different way of evaluation. Examining students' expectation, students expect both type of evaluation sustaining Pallof & Pratt (2007 ,p206) theory.

Empathy links to social interaction and communication frequency during online collaboration. To examine empathy, this research analysed students' expectations as regards to collaboration method, type of communication and frequency, group size and skills level. Definitely nearly, the whole population expects to work within small groups together with students of same skills level. Students expect that communication have to be synchronous and asynchronous and solve issues synchronously. Students expect communication to occur once a week, while females students seems to be more cautions as regards to communication frequency due to the fact that although 83% expect weekly communication 62% also expect daily communication. As regards to collaboration method students expect to use a hybrid method (online and face-to-face). Students' age group 21 to 35 demonstrated a different approach as regards to group work, meaning that even though 83% expect to work in small groups 63% expect to work individually, demonstrating that individual culture is still present among students especially among elder students. From the analysis results, it is revealed that students expect to find both type of communication asynchronous as well as synchronous. Having access of communication fosters

a sense of security among students. This security has to be supported from the lecturers' collaboration efficiency, responding promptly to students' issues generate a sense of community. Examining group factor results confirms that students prefer to work with small groups rather than large groups. This may be caused to avoid unfair evaluation. Students also expressed their expectations to work with students from different institutes probably to evade overlapping of skills and avoid competitiveness in search of full co-operation. Elder students express an individualistic interest due to a different interest in learning towards a career rather than a group work assignment.

Students' expectations directly link to the lecturers' behavior meaning that students' retention during collaboration is bound to the lecturers' efficiency and support. Results sustain that nearly the whole population of the students (83%) expects guidance and supervision as well as synchronous and asynchronous communication. An effective communication and guidance lead to collaboration between students and lecturers building up a co-operation founded on trust. Prompt responses with valuable feedback enhance trust and consequently increase stimulation among students. Variables demonstrated minimal differences. Experienced and elder students demonstrate more self-confidence expecting minimal support and individualistic approach. For an efficient collaboration, a holistic sense of communication must be sustained through collaboration, co-operation and respecting diversities adapting accordingly including providing support and assistance for different learning styles.

Chapter 6: Qualitative Analysis

6.1 Introduction

Semi structured interviews were addressed to the persons concerned for this part of the study. The interviews were selected according to their experience as regards to lecturing and role status. Interviewees for the ICT institute are; the ICT

Deputy Director and software lecturer, for the Art and Design Institute the Art and Design institute Director and interactive media lecturer.

6.2 ICT Institute Interviews

The ICT Deputy Director has been lecturing software students from level three to level five for the last twelve years. The interview to the ICT Deputy Director aimed to examine if students' expectations are attainable and if online collaboration can be an advantage or disadvantage for students and lecturers. The ICT Deputy Director demonstrated a positive attitude as regards to collaboration. The advantages he mentioned during the interview were exchange of ideas, co-operation between students with different skills and the opportunities to work with other institutes. A point that created hesitation was time flexibility. The Deputy Director said, *"flexible time could be an advantage and a disadvantage at the same time"* referring to both parts lectures and students'. Survey results demonstrated that only 35% of the students are willing to collaborate after school hours demonstrating their hesitations as regards to collaborating after school hours; according to the Deputy Director, this can also affect lecturers, due to the fact, that also lecturers have their concern to collaborate after school hours. Another concern mentioned by the Deputy Director was the change in role of the lecturer due to the different learning environment, which might create delays in process of transformation. According to the ICT director there should not be any difficulties from the ICT institute to collaborate with other institutes, it is only a matter of administrative structure before deciding to start collaborating with other institutes. When the ICT director was specifically asked, *"what makes an online collaboration work between ICT and Art and Design Institutes?"* He replied, *"Projects that are founded on financial intends such as, developing of new business and creation of innovative ideas would be a stimulant to collaborate between the two institutes"*. He expressed his concern as regards to conflicts that might occur between the two institutes. He said that there might be a controversy between institutes for course ownership and institutes exposure. This happens to avoid lack of students within the

institute. A popular course and an appropriate exposure will attract more students to the institute and therefore this might create a competition behind the scenes between the institutes. He concluded suggesting focusing more on students' skills and talents, creating projects more near industry demands such as creating life cases assignments and long-term collaboration starting from higher education up to degree stage, be more student oriented.

Student centered implementation is also being supported by various colleges and educational philosophers. Silvernail & Stump, (2012, p10) state that "*student-centered learning is viewed as the development of more independent learners, problem-solvers, and creative and critical thinkers—types of learners that many people believe are becoming even more important as we navigate the 21st century (e.g., Burkhardt, et al, 2003; Pink, 2005; Partnership for 21st Century Skills, 2008; Friedman & Mandelbaum, 2011)*".