
**Exploring the use of multiple intelligences in formative assessments as part of
a visual course**

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Abstract

Students enrolled in visual courses often display stronger visual spatial intelligences (Cooper 2009) but are still assessed focusing on linguistic intelligence. The purpose of the article is to explore whether utilisation of Gardner's multiple intelligence theory in the assessment process will improve the student experience of the assessment process. A questionnaire accompanied by a mock assignment was utilised to obtain views from respondents enrolled in a predominately-visual course where the assessment process is predominantly linguistic. The results do not indicate a preference for a single intelligence, but rather a preference for various questioning style that cater for various intelligences. The recommendation based on this study is that the summative assessment should allow the student the option to choose how to display acquired knowledge according to their individual intelligence.

1 Introduction

The purpose of the study is to investigate the use of Gardner's Multiple intelligence theory as applied to the summative assessment process to improve the student experience. This is achieved through the use of a quantitative research approach, with a sample population of students currently enrolled in a visual course at a tertiary institution.

Gardner's theory of multiple intelligences, first published by Gardner in 1983, challenged the dominant definition of intelligences at the time (Sparked [s.a.]). Gardner theorised that more than just the two accepted intelligences, mathematical/logical and linguistic, existed, and proposed seven intelligences. These intelligences are linguistic, spatial, musical, kinesthetic, interpersonal, intrapersonal and mathematical/logical (American institute for learning, 2013). Gardner's multiple intelligence theory tells us that all students learn differently. The literature review in this study shows evidence that students should be not only taught using the multiple intelligence theory, but assessed using it as well.

Bruce (1997) investigates specifically the use of multiple intelligence as used in the assessment strategy. Bruce describes assessments designed to capture a range of intelligences, how the intelligences should be given a more equal weighting, and how to use intelligence-fair formats. The literature review investigates options for extending multiple intelligence theory to assessments in various manners. For example, this could be to allow students to choose how to display knowledge or to combine different formats in one assessment.

2 Problem Statement

In education the theory of multiple intelligences is applied in the classroom to create practical learning scenarios that are suitable for multiple intelligences (Friedman [s.a.]: 11-13). It was noted that students enrolled in a visual course at a private higher education institution perform better in a practical assessment than a theoretical examination of the course content. The average mark for theory obtained in 2014 was 49%. Only 61 of 92 students passed the module. Conversely, in a practical module, 80 of 88 students passed the practical assessment. In the theory module, the exam mark is lower than the year mark. This course uses a practical formative assessment and a theoretical summative assessment. The results suggest a need to adapt the summative assessment to include multiple intelligence theory (Vithal and Jansen 2002:7- 8). Therefore this study investigates the assessment preferences of students enrolled in a visual course at a tertiary institution so that students are able to display their knowledge more effectively.

The objective of the research is to determine whether the presentation of different questions (based on various intelligences) support students in presenting their knowledge about a visual module in a way that supports their unique intelligence combination. Findings of the research may be used to revise future summative assessments to cater for various intelligences. Findings may also be used to motivate for the inclusion of different types of questions (based on various intelligences) in the summative assessment so as to give students the best possible opportunity to showcase their understanding and knowledge of the subject module. This is in line with the

general principles of assessment, stressing that for assessments to be valid, there should be alignment between formative and summative assessment (Gravett and Geyser, 2004: 92-101).

Linked to the objective, key research questions to investigate include:

How do students experience different types of questions using various intelligences to cater for their unique needs?

What value does the application of various intelligences have for students to display knowledge in ways that focus best on their unique intelligences?

In what way have the use of different types of questions, representing various intelligences, supported students in presenting knowledge in a way most suitable to their needs?

3 Literature Review

The assessment of a student's knowledge of a subject can be adapted to better suit the type of course the student is enrolled for (Gardner & Hatch 1989:5-6; Roscoe 2013). Brualdi (1996: 4) states that if student knowledge is assessed based on their learning style, it would allow for a wider range of students to prove that they have successfully participated in the learning process. Based on this, the assumption can be made that it is likely that students enrolled in a course will typically fare better when assessed using various intelligences unique to each student. To explain this Brualdi (1996) uses the example of an educational system that has been developed based on mathematic and linguistic intelligences, where assessments are designed based on these two intelligences. This approach, the author argues is unfair to the student whose learning style intelligence is anything other than the above two mentioned.

In a paper by Weber (2000), the use of multiple intelligence in an overall teaching approach, was investigated. As part of the research a method of including multiple intelligence in the assessment process was examined. During the study students were consulted on the use of rubrics and a point they raised was that it should allow the marker to award marks based on diverse conclusions drawn from research conducted and displayed using diverse intelligences.

Meyer and Glock (2004) discuss the need for constructing learning experiences that are based on multiple intelligences to afford students the opportunity to be successful. This they extended to the assessment process for students to illustrate their level of understanding better. According to Meyer and Glock (2004) they discovered that this approach is meaningful and has improved the overall experience. It was found that students who were able to display their knowledge from multiple choices were better able to show evidence of their learning. The reasoning was that students should not just be asked to display information at the end of a learning unit, but should engage in a meaningful manner with the content (Meyer and Glock, 2004).

According to Stanford (2003: p3) changing teaching strategies and curricula without changing assessment methods will not bring about the full benefit of multiple intelligence theory for teaching and learning. Thus, if multiple intelligence theory is to be used in classrooms, educators must change the way they assess students. The argument continues that multiple intelligence theory promotes awareness of a multitude of assessment strategies. These strategies should allow students to illustrate the level of understanding as well as their ability to use information in new and unique manners.

4 Research Paradigm and Methodology

The research study aims and methods were selected to answer the specific research questions. A quantitative approach is followed and allows the researcher to empirically determine the preferences of the students enrolled in a visual course when taking into consideration multiple intelligences (Sukamolson ([s.a])).

The research paradigm of this study is critical realism because it aims to investigate student reactions and opinions to different assessment methods, their perceived likes and dislikes, comments and subjective views. Critical realism according to du Plooy-Cilliers et al (2014: p31-35) is based on the belief that things exist even if nobody is conscious thereof. The aim of the critical realist is to understand and explain and not to assume that there will be a particular outcome. It is the responsibility of the research to change any situation that is not fair by exposing the injustice (du Plooy-Cilliers et al 2014 p31-33) (Somekh and Lewin, 2011:202-203).

Research Design and Data Collection and Analysis Method

A non-experimental research design is followed and a questionnaire is used to collect data. According to Hohmann (2006) quantitative research makes use of numbers to describe the findings and to conduct quantitative research variables need to be measured. For the purposes of this study the dependant variable is the manner in which theory assessments are structured in a predominantly visual course, with the predominantly visual course as the independent variable. Quantitative research allows for obtaining opinions from the respondents and the formulation of a structured analysis of the data.

Survey Design and Data Collection Method

A survey design is followed to conduct the research, it suits the research as it seeks to research opinions and trends (Shuttleworth [s.a.]). Because of the nature of the survey design, the research can be applied to change strategies in the assessment methods of institutions that offer predominantly visual courses. A cross sectional design is followed, aiming to provide a bigger picture that shows the whole situation at a particular point in time (du Plooy-Cilliers 2014: p149).

The type of cross-sectional survey used is a questionnaire that makes use of open ended as well as closed ended questions, to allow respondents a specific selection of answers (Welman, Kruger & Mitchell 2005: p157). For the purpose of this study, intelligence options are provided rather than a scale (du Plooy, 2009: 74). Open ended questions are used to obtain more detail and variation (du Plooy, 2009: 158). The questionnaire is accompanied by an assessment that illustrates the same content asked differently according to different intelligences.

Data Analysis Method

Since the study design is quantitative in nature, a statistical approach is followed. To obtain data that is free of bias a code book was developed to label, reliably analyse and record the data (PPA [s.a.]). The results of the questionnaires were captured and the occurrence of the respondent's answers are illustrated with the use of pie charts (du Plooy-Cilliers et al 2014: p206). Because the questionnaire makes use of closed ended questions, data will already be coded for that section. For the open ended questions a coding method was developed to interpret the answer of the respondent and relate it to a type of intelligence.

It was noted that respondents did not always use the examples provided in the intervention tool but made use of their own examples. Through the use of coding of information and noting similarities in answers, the data was analysed according to different intelligences. For example, where a respondent answered: 'key words that link to the topic and what comes to mind at that point' was coded as linguistic.

Research Population and Sampling

Students that are currently enrolled in a visual course at a tertiary institution were asked to participate in the study. The ages range from 18 to 35, inclusive of both genders. The different learning styles of these students are not known, as they come from all walks of life and bring various experiences to the research.

Convenience sampling as a subset of non-probability sampling will be used to reduce the sample size as this study is exploratory by nature. It will focus only on a subset of the population enrolled for a particular module within the visual course (du Plooy, 2009: 123) (du Plooy-Cilliers *et al* 2014: 142). The sample population is made up of students who are currently enrolled in a predominantly visual course where a trend has been noticed.

Limitations Applicable to the Research

This study does not look at the individual student's intelligences. This study focuses on the nature of the course offered, and how the application of various intelligences as part of summative assessments in a module will better suit the students' needs. The sample size is small due to the size of the student body at the tertiary institution that is accessible and the fact that the study is exploratory (du Plooy-Cilliers *et al* 2014: p275-276).

The researcher is not able to prove that including multiple intelligences in the assessment process would improve the overall student results due to the limit in scope of the research. Instead, the research focuses on the preference of students enrolled in a visual course with regard to the various intelligence questions linked to an assessment instrument.

Ethical Considerations, Validity and Reliability

To maintain ethical integrity, the researcher followed guidelines such as making participation completely voluntary and anonymous and not providing any incentive to entice respondents to participate. To ensure that respondents understand this, they were informed regarding their participation and rights. Respondents' physical and psychological comforts were prioritised and they were informed about the purpose of the research. To maintain the integrity of the research, no data will be falsified or distorted and bias will be avoided at all costs. Data collected for this research will not be used anywhere else (du Plooy-Cilliers *et al* 2014: p262 -273).

The research tool ensures that the data collected is repeatable and that similar results are achievable with a different population sample. Each and every questionnaire completed will be processed in exactly the same manner.

5 Results and Findings

The questionnaire contains two sections that respondents have to answer. The first set makes use of a scale to answer questions. The second set makes use of an intervention tool to answer questions.

Question Types Linked to Academic Strengths

To indicate an answer, questions 1-7 used a scale based on multiple intelligence theory. Please see table below for the break down and coding.

Table 1: Summary of possible answers and intelligence

Possible Responses	Intelligence
Visual illustration such as mind maps etc	Visual Spatial
Essay Style	Written Linguistic
Scientific/analytical approach based on research	Logical
Oral Presentation	Verbal Linguistic
Performance i.e role play	Body Kinesthetic
Collaborative group work questions	Interpersonal
Individual approach to illustrate own understanding	Intrapersonal
Research based mini dissertation	Written Linguistic
Multiple choice	Written Linguistic
Practical application of theory to photographs	Body Kinesthetic
Theoretical exam	Written Linguistic

Question 1

Based on the practical nature of photography, the above question was used to ascertain if the respondents preferred the current nature of assessment or whether the individual learning intelligence takes preference. The purpose of this question is to establish a preference. The results can be seen in figure 1 below.

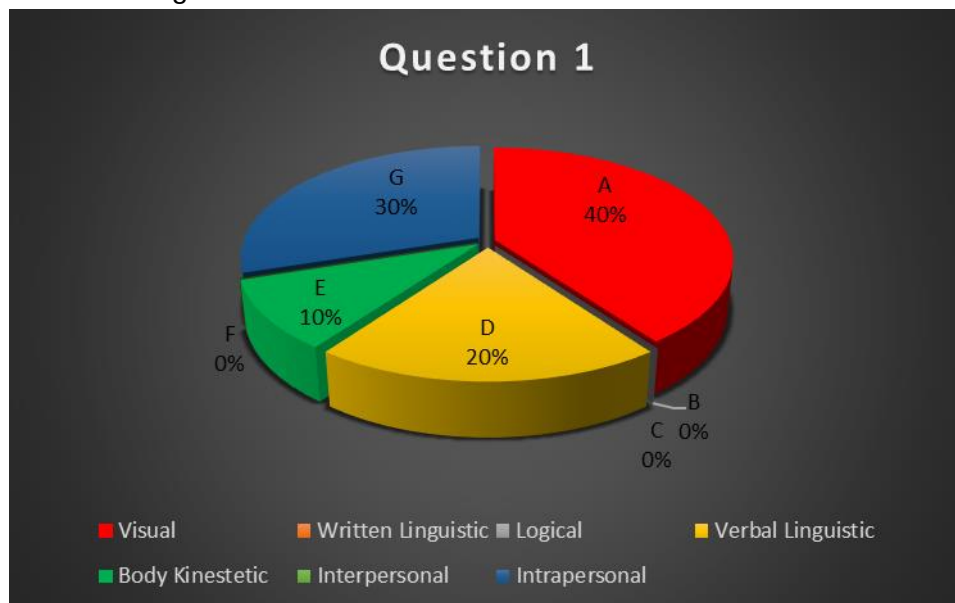


Figure 1: Question 1: Illustrating knowledge in a photographic subject.

The results in Figure 1 illustrate that 40% of the respondents prefer presenting the knowledge in a visual manner, whilst 30% chose intrapersonal. It is easy to assume that in the case of a practical field such as photography, the preferred method of illustrating knowledge is visual, the results from this question illustrate a variety in preferred methods. Therefore one could assume, although it might not be a conscious decision, that respondents react more strongly to their

individual learning intelligence rather than a traditional idea of how to illustrate knowledge in a specific field.

Question 2

Gardner's Multiple intelligence theory suggests that all students have a specific learning intelligence, which is not necessarily a conscious choice, but more of a natural instinct (Edutopia 2013). The purpose of question 2 is to indicate the respondents' individual intelligence based on natural instinct. Figure 2 shows an equal split between Visual and Intrapersonal approaches.

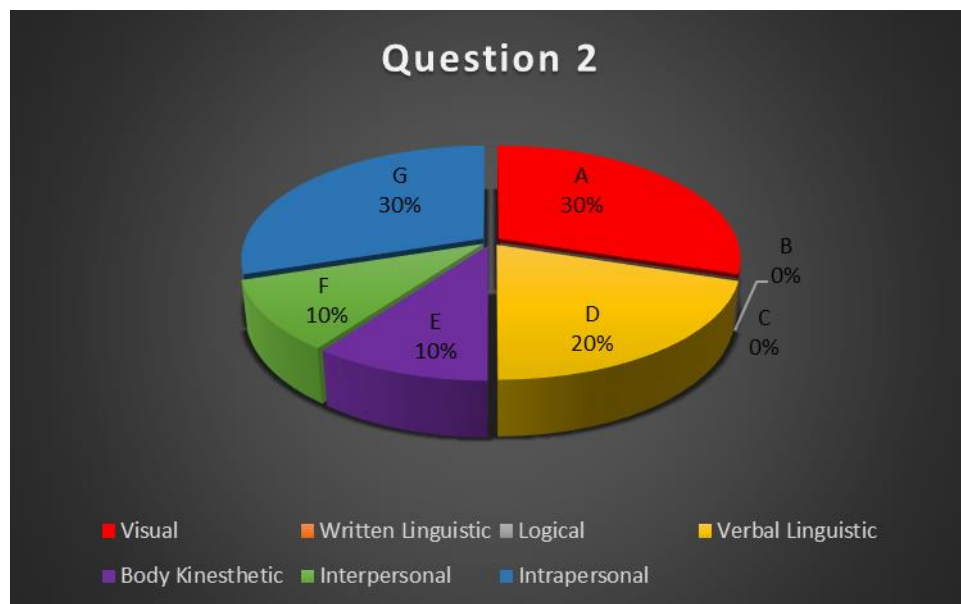


Figure 2: Question 2: Academic Strenghts

Twenty percent (20%) of respondents prefer verbal linguistic as the method of illustrating knowledge and 10% Body Kinesthetic. These results support theories that a single person does not have any one particular intelligence but a range of different intelligences, with one dominant intelligence (Edutopia 2013).

Question 3

Question 3 reinforces question 2 and allows the researcher to make deductions about what style of question allows the respondents to most successfully illustrate knowledge gained. Respondents were asked to select two answers because of observations that students do not just possess one single type of intelligence (Edutopia 2003). Figure 3 below illustrates that the majority of respondents find a visual approach the easiest manner in which to answer questions.

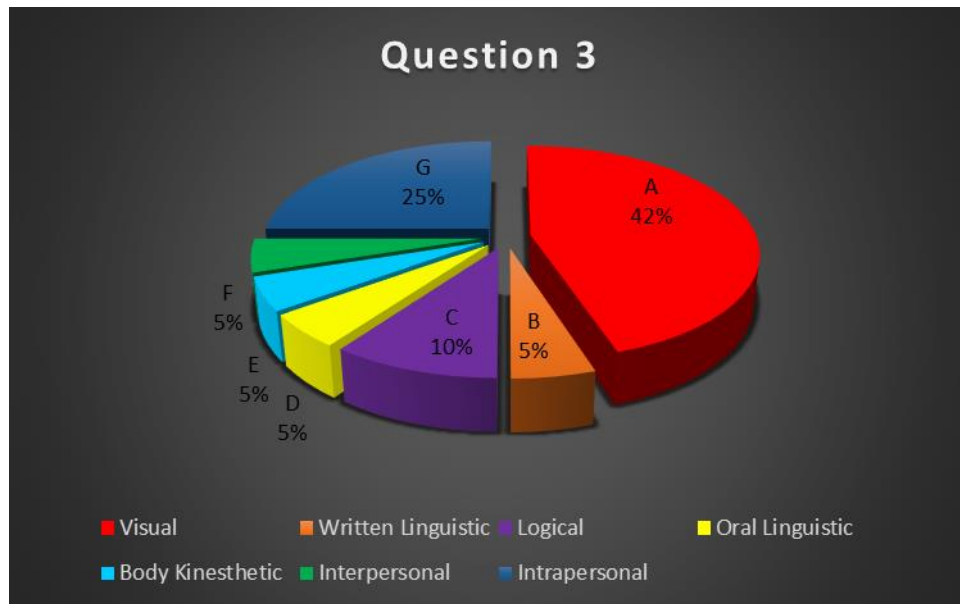


Figure 3: Question 3: Question style easiest to answer

When given the option to select two answers, 42% of the responses indicated a visual approach and 25% indicated an intrapersonal approach as the easiest option to illustrate knowledge in a visual field. These results arguably support the theory that one does not possess only one individual intelligence. The variety in responses also indicate that it is not safe to assume a general type of intelligence based on the nature of the course. It would be interesting to test the dominant learning intelligence and to measure whether this correlates with the preferred method of assessment.

Question 4

Although photography is practical in nature, to understand it and execute a good quality photograph, one has to understand the theory (Study.com [s.a]). The question is, should this theory be assessed in a theoretical or practical manner. Question 4 aims to ascertain the preferred manner of assessment of such a theory module in a visual course. Respondents were given a variety of linguistic options to determine preferences. Figure 4 below illustrates that 30% of respondents indicated a written linguistic approach in the form of multiple choice, 20% written exam and 10% essay as the preferred method of answering theoretical assessments. It is interesting that visual presentation only received 20% of the responses but in question 3, 42% of the respondents opted for visual as the easiest manner to answer questions. This indicates an influence on preference by the nature of the content, i.e. theory or practical.

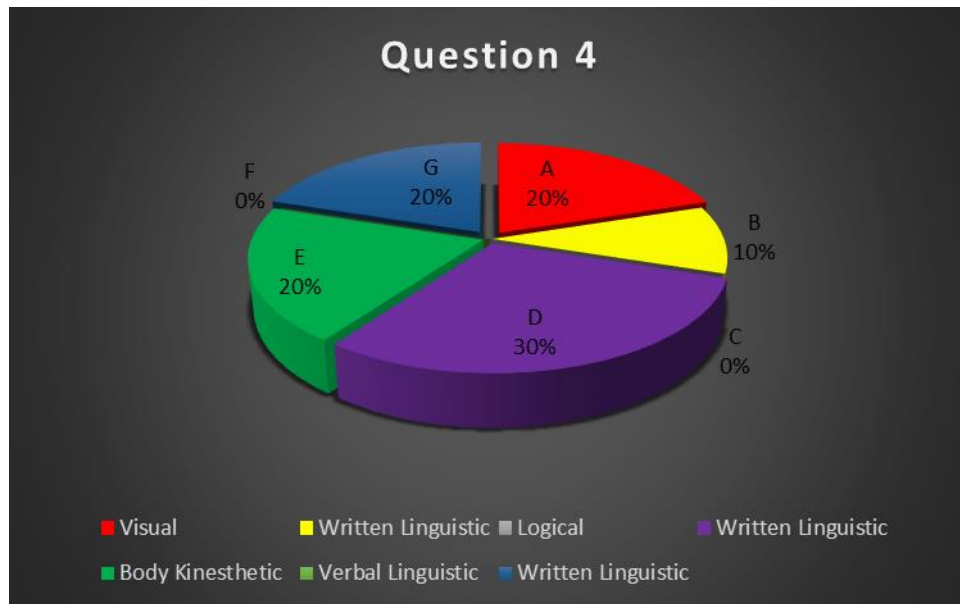


Figure 4: Question 4: Theoretical assessment

The responses do not conclusively support a preference for any one specific intelligence during the assessment of a theory module. Instead there is a wide variety of responses and this supports the conclusion that one cannot assume that only visual intelligence learners will enrol in a visual course. It strengthens the idea that to effectively assess the knowledge of any student, one would have to provide students with different options.

Question 5

The purpose of assessment is not only to assess whether a student has learned and retained information, but extends the learning process. Through continuous assessment students are able to continue the learning experience and build on existing knowledge (Oxford Brookes University 2011). The purpose of question 5 is to ascertain whether the respondents identified a clearly preferred choice of intelligence when considering assessment for learning. Figure 5 indicates that 30% of respondents believe they would learn most from a verbal linguistic approach, with an equal split between visual and interpersonal.

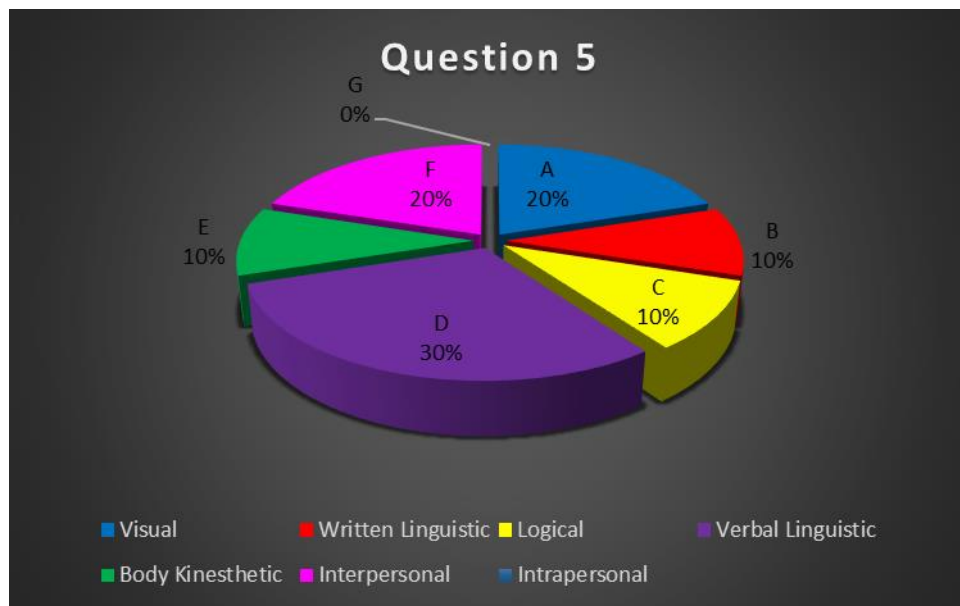


Figure 5: Question 5: Assessment for learning

Here most respondents indicated verbal linguistic, possibly due to a more traditional teaching style. Where knowledge is imparted verbally, respondents choose a verbal presentation of that knowledge. Although this does not indicate visual intelligence it also does not support the written linguistic intelligence which representative of a written examination. This suggests that the manner in which students are assessed should be investigated in greater depth to ascertain the best method to assess students in support of learning.

Question 6

Question 6 determines which type of questions supports assessment for learning. It supports question 5 and strengthens the argument that individual intelligences support sustainability of knowledge gained through studying. Figure 6 indicates 30% of respondents are more likely to retain information if it is presented visually. Written and verbal linguistic share an equal split of 20%.

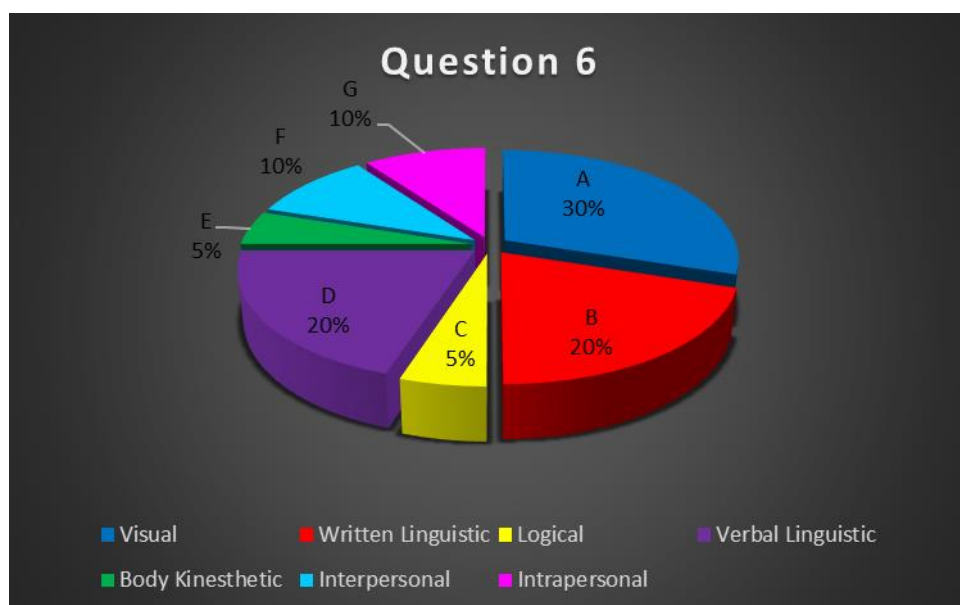


Figure 6: Question 6: Assessment for retaining knowledge

The answers to questions 5 and 6 do not seem to support each other. This debunks the theory that the preferred methods of assessment to obtain and retain information are the same. Because the responses do not correlate they do not support each other. This supports the theory that students do not have one single intelligence style.

Question 7

This question supports previous questions such as determining academic strengths etc. Figure 7 indicates a 40% occurrence of a visual approach to assessment in support of success in the assessment.

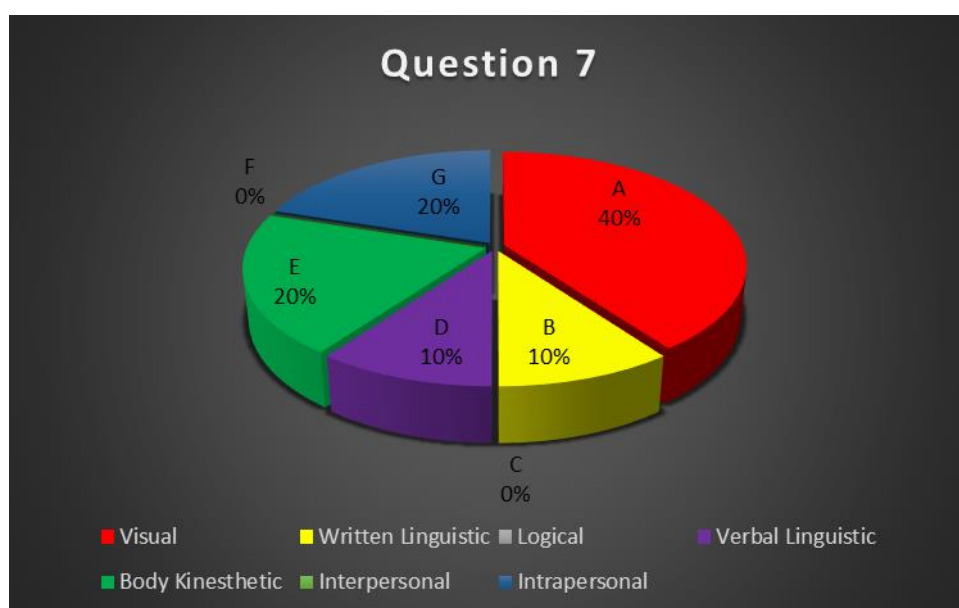


Figure 7: Question 7: Success in assessment

This response correlates with the fact that the respondents are enrolled in a visual course. It is possible the respondents reacted to the questions on two different levels, either based on a holistic view of the nature of the course or from a specific module's point of view. Based on the variation in dominant responses, i.e. visual or written linguistic preferences, it is worth investigating whether the nature of the module content influences the preferred manner of assessment.

Question Types Suited to Respondents' Intelligences.

Respondents were given an intervention tool containing different manners of assessment based on Gardner's multiple intelligence theory. The respondents chose which type of question they preferred to answer from this for questions 8-9. Table 2 below indicates the type of intelligence associated with each question in the provided assessment.

Table 2: Summary of Assessment Questions and Intelligence

Question	Intelligence
Question Type 1	Visual Spatial
Question Type 2	Written Linguistic

Question Type 3	Logic
Question Type 4	Verbal Linguistic
Question Type 5	Body Kinesthetic
Question Type 6	Interpersonal

Question 8

The purpose of this question is to determine without stating a specific intelligence, whether the respondents are able to identify a specific intelligence. The aim here is to support the first set of questions. Figure 8 indicates that 80% of the respondents would prefer visual intelligence as the method to illustrate their knowledge of the topic in an assessment.

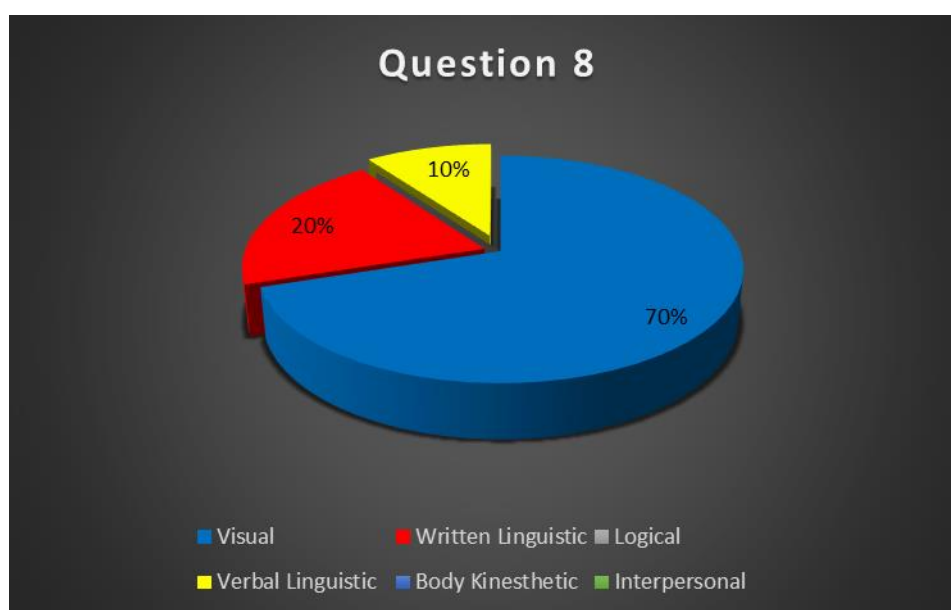


Figure 8: Question 8: Illustration of photographic knowledge

This is the first instance where the responses clearly indicate a preferred method of assessment. This could be due to the combination of questionnaire and intervention tool. This suggests the need for further study to determine if the nature of the topic influences the perceived advantage of assessment type according to intelligence. To this end, a study could be conducted using two groups of students assessed on the same content. One group should receive assessments as per usual and the test group should receive assessments based on the intelligence linked to the subject area. The results of the two different groups could be compared to determine which offered better results. Careful consideration would need to be given to elements such as ethical considerations regarding the impact of results in the above scenario as well as splitting the groups according to academic performance so that one group is not perceived as academically stronger than the other.

Question 9

The results below, as in question 2, indicate a preference for visual. In question 2, the respondents indicated an equal preference for intrapersonal and visual intelligence. Where as in question 9, 70% of the respondents chose visual intelligence as the area of strength in which they are best able to complete assignments in a visual course.

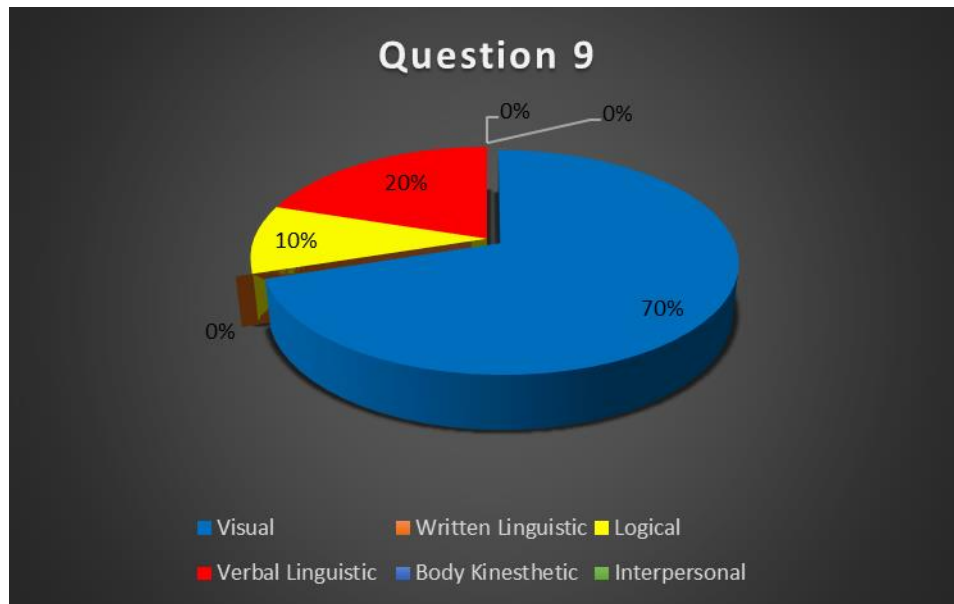


Figure 9: Question 9: Academic strengths

The majority of respondents indicated that their strengths in assessment lie within the visual intelligence. This suggests that an assessment where the respondents are expected to only make use of the written linguistic intelligence potentially has a negative impact on student assessment. Should we accept that assessing students based on their intelligence would be an advantage, then there is a clear argument for the inclusion of multiple intelligence theory in the assessment process. While it would be a logistical nightmare to ascertain individual intelligences of a student population, it seems worth investigating the option to include various question types based on multiple intelligence theory.

Question 10

If we accept the premise that a person will not have a single intelligence but rather a dominant one supported by others, then it becomes logical to ask the respondents if the inclusion of multiple intelligence in the assessment assists with the completion of assignments.

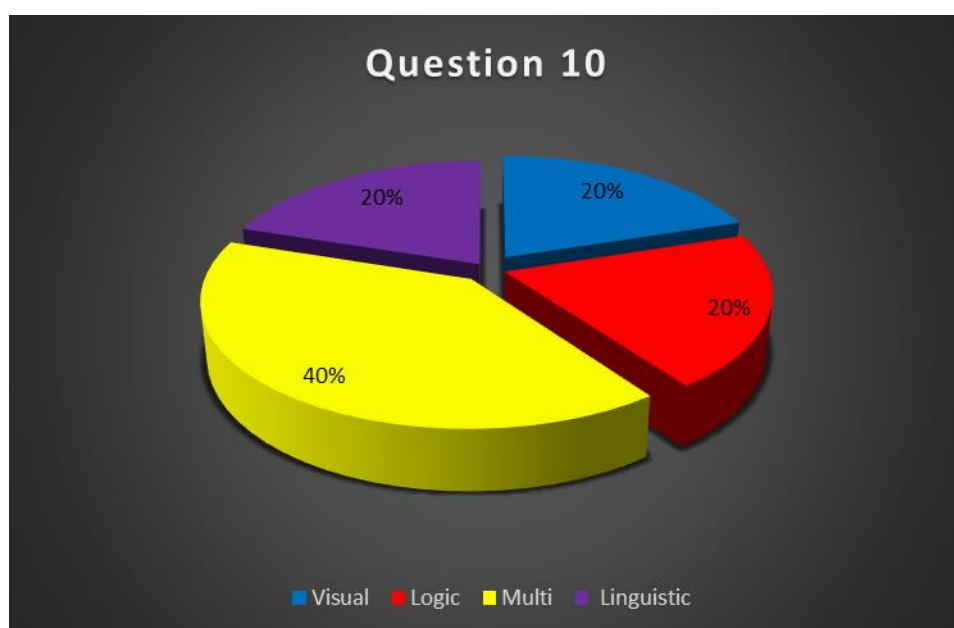


Figure 10: Question 10: Various intelligences

Question 10 shows that most respondents prefer a multitude of platforms during assessment to illustrate their knowledge of a specific subject area. This suggest including a variety of intelligences in assessments. The responses to question 10 support the summation made from question 9. It is worth investigating the inclusion of multiple manners in which to present knowledge during an assessment.

Question 11

The purpose of question 11 is to allow respondents freedom to make any recommendation outside of intelligence theory. The questions is free of any bias and yet 40% of the responses indicate a preference for including visual intelligence in the assessment process as seen in Figure 11.

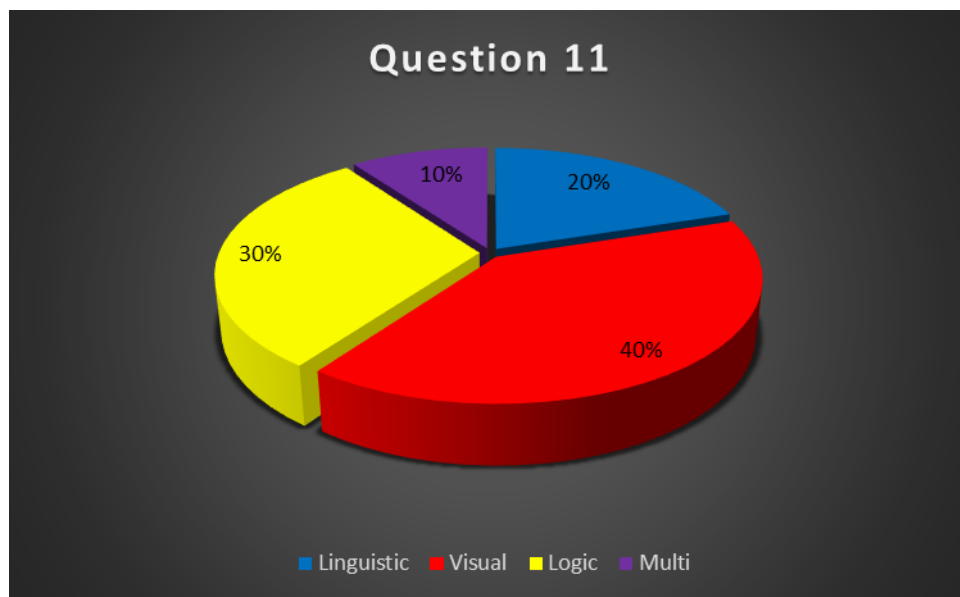


Figure 11: Question 11: Recommendations

Figure 11 indicates a preference for more visual approaches to the assessment method. Based on the number of responses indicating a logical approach to the manner in which assessments are structured, a study to determine specific use of language and logic in an assessment to improve success could potentially prove valuable.

Question 12

Question 12 was included to ascertain the perceived value of including multiple intelligences in the assessment process. This question adds value to the study because respondents might not be able to identify objectively their dominant intelligence preference. Question 12 illustrates that the respondents see the value in multiple approaches during the assessment process.

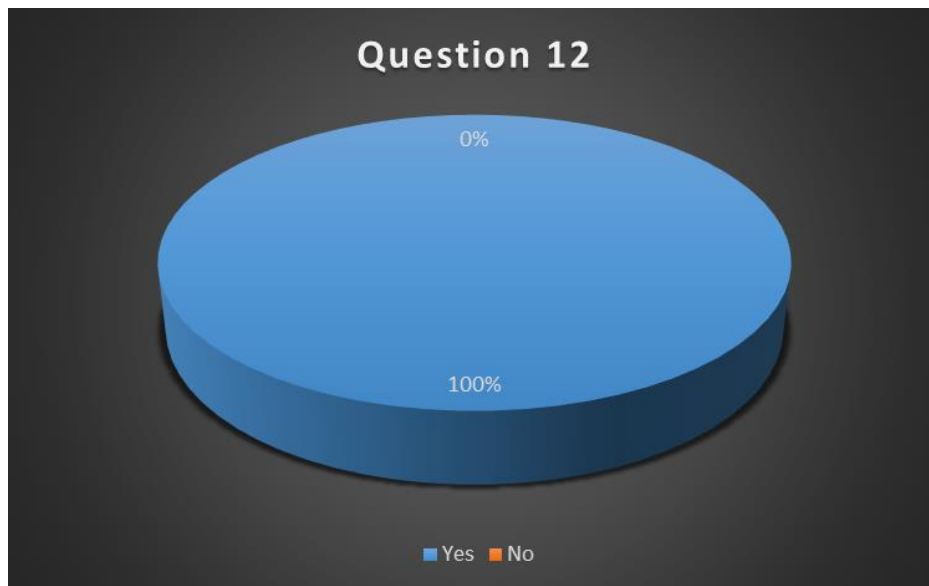


Figure 12: Question 12: Perceived value

Figure 12 illustrates 100% of respondents prefer a choice in how they present knowledge on a specific topic during an assessment. Based on the data provided to explain the answer, it is clear that respondents choose a range of different methods with which to illustrate knowledge.

Question 13

The question measures whether the respondents identify value in an individual approach and by extrapolation indicates awareness of their own intelligence type. It provides information to support the theory that a person has one dominant intelligence but uses a variety. Further to this study it indicates that it is not safe to assume simply because one is enrolled in a visual course that one's dominant intelligence will be visual.



Figure 13: Question 13: Individual needs

Figure 13 illustrates that 90% of respondents value the inclusion of different options in which to illustrate knowledge in assessment. Where the respondents indicated no, the clarification indicated the need for stability by using same style of question for all assessments, in other

words, the safe option. It is generally accepted that people are creatures of habit (Boyle 2016) and that might be the reason for not wanting different options in assessments.

Based on the justifications that were provided in questions 10 to 13 it is clear that the respondents would feel more comfortable with choosing from a variety of manners in which to illustrate their knowledge. The need of the student to a large extent seems to be determined not only by their own type of learning intelligence but also by the type of question being asked. A theme that was identified while analysing data is that the respondents asked for clearly structured instructions in a formative assessment. This would indicate that the language being used in a formative assessment is vitally important in how the student answers the instruction.

7 Recommendations

It is recommended that summative assessments should be structured in such a way that a student is able to choose how to present the learning that took place in a manner best suited to their own learning intelligence. Based on evidence from the data and the literature review, it seems that students are most likely to successfully illustrate the learning that took place if they are able to choose the manner in which they answer (Brualdi 1996)(Meyer *et al*:2004). Based on this, it does not seem viable to provide a group of students with a single type of intelligence based assessment. But rather to include options for the students to choose from when presenting knowledge. Brualdi (1996) suggests that a wider range of students are able to illustrate successful participation in the learning process in this manner.

Assessments could be presented in one of two ways. Firstly to let the students present knowledge using a pre-defined spread of methods. Alternately students could have the option of selecting the method of displaying knowledge. This will have to consider the course the student is enrolled in and will have to be carefully aligned to the purpose and outcomes. For example, if the outcome is to create a product photograph, it should not be expected that students write an essay but rather produce a photograph. To maximise the learning impact, one could combine this with a research document, planning documents such as scamps or mind maps and a presentation to discuss creative choices and execution.

Further recommendations are to investigate the value of testing students' intelligence style, where that knowledge may assists the student in the learning and assessment process. Another recommendation is to determine if a student has one overriding learning intelligence or one dominant intelligence supported by other intelligences. There is already an argument that people do not have just one form of intelligence but rather a dominant intelligence (Edutopia 2013). To conduct the potential study, one would have to enlist the aid of a psychologist to test the dominant intelligence. Once determined, one would have to investigate how a student fairs with assessments that support the dominant intelligence. To track the reaction to this information, one would have to do a pre and a post test of the reaction to the assessment process. The possible value of such a study is that it might help students improve retention of information, the learning experience and through put rates.

Finally it is recommended that further investigation is conducted to determine the preferred assessment style by students based on the specific content covered and not the broader context of the course is conducted. The data in this study illustrates evidence that students

prefer different assessment methods based on the nature of the content. It would be worthwhile to investigate why this is, as well as ascertaining student opinion on how different assessments should look.

8 Conclusion

The research conducted in this study investigated the application of Gardner's theory of multiple intelligences to the assessment process in a predominantly visual course. The results indicate a clear preference for including a variation of intelligences during assessment. This would allow students to present knowledge in a manner most applicable to their intelligence preferences. There is also an indication that students see the value and need for including questions that cater for their unique intelligence preferences. By catering to this it would allow the student to better display knowledge gained and would allow a better opportunity to successfully present proof of knowledge gained.

The findings show it should not be presumed that students enrolled in a predominantly visual course would prefer an assessment based on the visual intelligence. In fact, no one specific style of assessment preferred was determined. Instead, it was found that there is a preference for a multitude of approaches when determining how students experience different types of questions using various intelligences.

Recommendations include adjusting the assessment to cater for multiple intelligences, as well as conducting further studies to investigate the advantage, if any, of assessing the intelligence type of individual students. Based on the variation in answers, most respondents prefer a range of different approaches when illustrating their knowledge in an assessment. This adds value to the student experience because it makes the student feel safe and secure in their learning environment.

Rather than choosing one particular style of assessment based on visual intelligence, students enrolled in a visual course prefer a multitude of approaches in order to illustrate evidence of the knowledge they have gained. The study by Meyer and Glock (2004) supports this finding in their study where they found that students were better able to illustrate evidence of learning when they were able to display knowledge from multiple choices.

The study illustrates a need to include Gardner's multiple intelligence theory in the assessment process. It does not conclude that only one particular type of intelligence should be used, but rather that a range of different intelligences should be utilised.

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Annexure A

Dear Respondent

The purpose of the study is to investigate whether the inclusion of various methods to assess your knowledge and understanding of the module contents provided you with broader opportunities to present your understanding of the visual arts course. The questionnaire forms the basis of exploratory research currently being conducted on various methods of assessment. In a previous assignment you have been exposed to various questions, each requiring of you to use other skills and methods to complete various questions. The aim of this questionnaire is to determine whether you perceived the different way in which questions were designed as useful in presenting your knowledge and understanding in a way that is most comfortable to you.

Please note that participation is completely voluntary and should you want to terminate participation at any point you are free to do so. You will not in any way be penalised for not participating in the research. Your anonymity is important to the researcher and as such no biographical or identifying information is asked.

Please answer all questions in the questionnaire should you choose to participate in the questionnaire.

Should you wish to contact the researcher for any information once the research has been completed you may do so using the following contact details:

janasantilhano@gmail.com

0743199255

Instructions:

- Please answer all the questions.
- Where there are multiple choice questions, tick the relevant option. For example:

J.	Example	X
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- Answer open-ended questions by writing your view related to various types of questions.

Questions

1. Which style of question do you believe would best allow you to illustrate your knowledge in a photographic subject? Select ONE option.

A.	Visual illustration such as mind maps etc.	
B.	Essay style	
C.	Scientific/analytical approach based on research	
D.	Oral presentation	
E.	Performance i.e role play	
F.	Collaborative group work questions	
G.	Individual approach to illustrate own understanding.	

2. Which style of question plays to your academic strengths? Select only ONE option.

A.	Visual illustration such as mind maps etc.	
B.	Essay style	
C.	Scientific/analytical approach based on research	
D.	Oral presentation	
E.	Performance i.e role play	
F.	Collaborative group work questions	
G.	Individual approach to illustrate own understanding.	

3. What style of question do you find easier to answer? Select TWO options most relevant to you.

A.	Visual illustration such as mind maps etc.	
B.	Essay style	
C.	Scientific/analytical approach based on research	
D.	Oral presentation	
E.	Performance i.e role play	
F.	Collaborative group work questions	
G.	Individual approach to illustrate own understanding.	

4. If a subject in photography is purely theoretical, which style of question do you believe should be used to assess that subject contents? Select ONE option.

A.	Visual illustration such as mind maps etc.	
B.	Essay style	
C.	Research-based mini dissertation	
D.	Multiple choice	
E.	Practical application of theory to photographs	
F.	Oral Presentation	
G.	Theoretical exam	

5. Which style of question do you believe would permit you to learn more about a practical photography-related topic? Select ONE option

A.	Visual illustration such as mind maps etc.	
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B.	Essay style	
C.	Scientific/analytical approach	
D.	Oral presentation	
E.	Performance i.e role play	
F.	Collaborative group work questions	
G.	Individual approach to illustrate own understanding	

6. Which style of question is most likely to allow you to retain the knowledge you gain from completing an assignment? Select TWO applicable options.

A.	Visual illustration such as mind maps etc.	
B.	Essay style	
C.	Analytical style questions based on research	
D.	Oral presentation	
E.	Performance i.e role play	
F.	Collaborative group work questions	
G.	Individual approach to illustrate own understanding	

7. Which style of question would you be most likely to answer successfully? Select ONE option.

A.	Visual illustration such as mind maps etc.	
B.	Essay style	
C.	Scientific/analytical approach	
D.	Oral presentation	
E.	Performance	
F.	Collaborative group work questions	
G.	Individual approach to illustrate own understanding	

The following questions relate to different manners in which you could be asked to present information in an assessment. Please read through the assessment before answering these questions.

8. After reading the assignment related to various ways in which to present photographic knowledge, which question would allow you to illustrate your knowledge of the topic the best? Explain your answer.

9. What are your strengths when it comes to completing assignments? Explain your answer by using a relevant example.

10. In what way, if at all did the inclusion of various types of questions in the assignment help you to use creativity and knowledge to complete the assignment?

11. What recommendations can you make to the educator to improve the way in which assignments questions are being posed so that it enhances your ability to answer the questions? Explain by using a practical example if possible.

12. Do you perceive any value in assessments that allow you to present your answer in different manners according to your choice? Please explain your answer.

13. In your opinion does the inclusion of different options in which to present your answer, better suit your individual needs as a student than having to present date in one prescribed manner. Please explain your answer.

Thank you for your contribution to this research.