

Exploring the use of the Flipped Classroom as an Education Delivery Method

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Abstract

#RhodesMustFall and #FeesMustFall are slogans that characterise the current state of protest, unrest, and crisis in South African higher education. Tension stems from disparate expectations and misalignment regarding the purposes, policies and functional processes of education, as well as the needs of students. Providing relevant education requires a dynamic and socially-referenced curriculum, including the delivery of teaching and learning (Van Rooyen, 2016). This exploratory research investigates how the tools and activities of the Flipped Classroom can contribute to an active learning environment based on student-centred learning, at a private higher education institution. This mode of education delivery, with its element of blended learning, has potential for redressing some of the negative effects of hidebound education traditions and colonisation. It does so by promoting a milieu wherein students are encouraged in self-reliance and self-determination, in keeping with the stated desires of students (Kamanzi, 2016a). Recommendations are also made for informing best practice in a B Ed (Foundation Phase) Programme.

1 Introduction, Purpose, and Rationale of Research

The intense South African (SA) debate reflects a worldwide initiative to decolonise knowledge and democratise education curricula (Connell, 2016). At the heart of the SA situation, is the view that knowledge in postcolonial societies is acknowledged nominally, despite documented innovation and concept formation (Connell, 2016). Within higher education (HE) there is currently a strong drive for recognition of indigenous knowledge and the need to reshape curricula to embrace mutual learning and a plural approach to knowledge, beyond the global Northern metropole (Connell, 2016). In redesigning curricula, it is helpful to consider Mkgwashi's (2016) four ways of approaching curriculum theory, i.e. curriculum as product, process, context, and praxis. This research study explores curriculum as process, investigating as it does the interaction of educator, students, and knowledge in the Flipped Classroom. It, particularly, supports how a shift to student-centred learning can better serve the needs of students today, for the curriculum development process systematically organises what will be taught, who will be taught, and how it will be taught. This is in alignment with the move to decolonised self-determination (Kamanzi, 2016a).

The benefits of moving from educator-centred to student-centred learning, to improve the delivery, quality, and purposes of education, are well-documented (Schön, 1983; Huba and Freed, 2000; Allan, 2004; Doyle, 2008). Albeit that the change challenges long-held assumptions and traditions about roles and responsibilities (Barr and Tagg, 1995, cited in Attard, Di Ioio, Geven and Sant, 2010), with some educators taking up the form rather than the substance of student-centred learning (Brodie, Lelliot and Davis, 2002, cited in Parker and Deacon, [s.a.]). To alter classroom practice, operational strategies require innovative, attitudinal adaptation. Authors such as Bergmen and Smith (2012) propose that alternative educational pedagogies be used to foster more student-centred perspectives. Thus, the Flipped Classroom has potential to ameliorate the effects of decolonisation as it inverts the traditional roles of educator and student (Bishop and Verleger, 2013). Rather than the educator controlling the learning process through direct instruction only, the student is an

active participant in knowledge acquisition through “homework” before the lesson and classroom exercises.

This exploratory research considers if Flipped Classroom delivery changes the attitude, expectation and participation of students from a results-driven focus to a wider, more engaged approach, through the methodology of constructivism (constructing understanding and knowledge through experience and reflection). Supporting the view that most knowledge is hypothetical, the research paradigm of post-positivism (a modified scientific method which seeks to establish patterns/relationships amongst pre-defined variables) is applied, using deductive reasoning to test theories through survey design (Sage Publication, [s.a.]).

2 Problem Statement, Research Questions, and Objectives

Disparity exists between what is taught and what students want in SA higher education, with the hierarchical relationship between educator and student being challenged in the decolonisation debate (Kamanzi, 2016b). The Flipped Classroom offers a viable solution for alternative delivery, given that students today have different needs (Northern Illinois University, [s.a.]). They prefer engaging actively in the construction of knowledge, in a social context wherein they interact with instructors, classmates, and content. The Flipped Classroom utilises multi-modal learning processes to enhance student participation, efficacy, and worth (Heafner, 2004). Instructional content is recognised as connecting to purposes, concerns, and interests, with attendant value and motivational attachment (Covington, 1984). The Flipped Classroom reflects a move from traditional “instruction” to “producing” learning, with students being central to the experience, which aids in the construction of worthwhile output (Barr and Tagg, 1995, in Attard et al, 2010). This provides a meaningful vehicle for decolonising the curriculum to reflect indigenous content and context (Mgqwashu, 2016) so that SA students feel what is being taught is accessible and specific to their needs (Kamanzi, 2016b).

The objective of this quantitative research is to establish the possible causal relationship between Flipped Classroom methodology and improved student engagement using empirical analysis. This is guided by the following research questions, which focus and define the research problem (De Vos, Delport, Fouche and Strydom, 2011):

- In what way can the Flipped Classroom be used to encourage student engagement?
- How does active learning in the Flipped Classroom allow students to relate to learning content?
- What tools or activities related to the Flipped Classroom have the strongest influence in promoting student participation?

3 Theoretical Conceptualisation

To conceptualise the essence of this study, it is important to understand the meaning of the term Flipped Classroom, with its emphasis on student-centred education, and its potential for developing a decolonised curriculum, which encourages personal responsibility, accountability and independence (Kamanzi, 2016a). For, as stated by Mgqwashu (2016), if “curriculum” embraces the broadest educational experience, HE needs first to determine the development and dissemination of curricula. Only then can decolonisation proceed.

The *Flipped Classroom* allows for flexible learning spaces. In independent study, out-of-class, students choose when and where to explore activities such as video lectures, further reading and practice problems (pre-prepared by the educator). Thereafter, in the group space, learning in-class (facilitated by the educator) becomes dynamic and social as students apply concepts and construct further knowledge and understanding in active, creative engagement (Brame, 2013). Known as blended learning, this pedagogical approach, therefore, promotes personally meaningful learning (Flipped Learning Network. 2014).

How then does the Flipped Classroom demonstrate a shift from educator-centred to self-determined, student-centred learning, with the attendant element of constructivism? Various related studies have been published. For example, in educator-centred learning, the “sage on the stage” (Weimer, 2002, p. 76) employs modes/methodologies of delivery which result in student knowledge acquisition through repetition, memorisation and recitation of standardised datasets (Candella, Dalley and Benzel-Lindley, 2006, as cited by Zeki and Güneyli, 2014). Historically, information transfer in SA classrooms adopted this style. Therefore, enhancing the classroom milieu, rather than devolving to conventional teaching formulae, is the first stage in transforming pedagogy (Fishel and Segal, 1998, as cited by Msila, 2006), as well as vital in informing strategies for decolonisation.

Furthermore, as asserted by Candella et al (2006), today's graduates are not only required to acquire knowledge in their fields but also information outside the educational system and context. Zeki and Güneyli (2014) reinforce this by suggesting that curricula need to develop higher-order thinking, decision-making, and problem-solving skills, as well as allow for self-reflective, self-assessment exercises. In turn, emergent work-based skills span subject specialisation and generic attributes (e.g. versatile teamwork and social adeptness), to promote employability (Development Bank of South Africa, 2010). Therein lies the possibility of societal transformation. However, Shay (2015) suggests that, even if content is altered to emphasise work-based skills, without decolonising and reforming the curriculum through, inter alia, recognition of local academic input, review of language policies and alternate modes of delivery, very little is achievable.

A constructivist approach with its shift to student-centred learning is, in the SA context, ostensibly reflected in the new democratic education system (Skosana and Monyai, 2013). Msila (2006) asserts that to contribute to nation building, HE institutions have a part to play by establishing new structures and re-working curricula. Thereby transforming from “teaching factories” into “learning communities,” wherein educators and students alike work collaboratively towards significant, shared ends (Angelo, 1996, in Msila, 2006). This is

supported by the present push to decolonise the curriculum for, through interrogating teaching modes, developmental paradigms, and what constitutes “model” higher education, South Africa can investigate practical solutions to the education crisis (Kamanzi, 2016c). Blended learning in the Flipped Classroom which encourages student control over pace, time, place and path while promoting debate and cross-fertilisation of ideas, is an option worthy of consideration.

4 Research Methodology

4.1. Research Paradigm and Methodology

The research is based on a reciprocal relationship between the worldview of post-positivism, the strategies of enquiry and the research methods (Taylor and Medina, 2013). Post-positivists believe that observation is fallible and individuals construct their worldview based on the possibility of an objective reality (Sukamolson, [s.a.]). This is fitting, as the Flipped Classroom is informed positively by a constructivist approach pivotal in designing appropriate methodologies (Anderson and Krathwohl, 2001, cited in Huitt, 2011). Accordingly, the research includes generation of suitable questions, data collection and analysis, deductive inference and validation. The exploratory nature of post-positivism explains why this is an appropriate worldview; it embraces the principles of determination, reductionism, empirical observation, measurement, and theory verification (Cresswell, 2009). The questionnaire provides a vehicle for determining if this teaching strategy encourages greater student engagement with subject content. As Flipped Classroom outcomes can be subjective in measurement, this empirical research employs a quasi-scientific/mathematical approach, thereby exploring causal relationships, applying analysis and lending credibility (Cohen and Manion, 1980). Thus, this statistical approach adds reliability and a solid base for the presentation of findings by graphical and statistical analysis (Denscombe, 2010), rather than relying on speculative anecdotal evidence.

4.2. Research/Survey Design, Data Collection and Analysis Methods

In this exploratory research, a questionnaire investigates if Flipped Classroom methodology promotes student-centred engagement. It is completed only once by the defined population of student teachers in a single class at a given time. Various types of questions, designed to enhance objectivity and validity, are used to ensure question flow and question variety, as well as simplifying and quantifying responses (Du Plooy-Cillers and Cronje, 2014). These include closed-ended questions (direct and those with fixed answers, from which the respondent selects one), and weighted matrix questions (using a 5-point Likert scale). The open-ended, interpretative comment question (which is codified and quantified) lends backing to research interpretation and allows respondents to qualify their opinions (FOA Corporate Document Repository, [s.a.]). Analysis reviews the overall perceptions of students regarding value, depth of understanding and enjoyment of Flipped Classroom learning techniques. Data is presented using graphics (pie charts and bar graphs). In turn, the findings are compared and analysed in relation to existing literature and research from reputable sources.

4.3. Research Population and Sampling

The target population is students studying towards a B Ed qualification. Taking a subset reflective of this population and applying non-probability sampling allows the researcher to choose the contributing individuals, i.e. eight respondents in their fourth year of study, engaged in the Social Development Module (Pascoe, 2014). Benefits include reduced costs, timeous and easy execution and improved accuracy in reporting (Ross, 2005). In turn, convenience sampling is evinced in respondents' accessibility and proximity. The appropriateness of the homogeneous population is apparent as all these students are in teacher-training and the pedagogic influences of modes of delivery, student-centred education, and constructivism are familiar concepts to most. A racial and cultural mix is evident, albeit that all the respondents are women. The socio-economic level is middle to upper-middle class; the students are enrolled at a private HE institution, and there are no bursary students. Ages range between 21 - 26 years. In generating a valid, defined sample, the researcher develops a sampling frame, wherein specific details of variables are identified. The practicality of using the small available sample cannot be under-estimated, albeit that possible bias and sampling error need to be considered, as results of the study cannot speak for the entire population. (Oxford Journals, [s.a.]).

4.4. Feasibility, Reliability, and Validity of the Research

The feasibility study shows that this quantitative research is worthwhile, practical and can be delivered successfully (Bowen et al, 2009). It seeks to answer the research questions to improve the education offer in the Social Development Module. The study has acceptability, comfort, familiarity and security with the respondents, as they are taught by the educator-researcher and a relationship of trust exists. The questionnaire, addressing education design and delivery theory, is simple, constructive, accessible and time-conducive. There are no attendant costs.

Reliability and validity are shown, as they relate to the measurability of numerical and statistical results (Koonin, 2014, cited in Du Plooy Cilliers et al, 2014), i.e. through evidential data that iterates the causal relationship between Flipped Classroom methodology and student participation. Thereto, inter-rater reliability (different participants responding to the same instrument) and internal consistency (correlation of performance across participants) are demonstrated, despite there being a single educator-researcher. Internal validity is shown as the accessible population represents the target population and is easily reached. This points to external validity (generalisation and transfer of results) (Koonin, 2014, cited in Du Plooy Cilliers et al, 2014).

4.5. Limitations of the Research

In education research, using quantitative research as opposed to action research (Osterman, Furman and Sernak, 2014), which allows for extrapolation of statistical data from the sample to the general population, may be considered a limitation (Labaree, 2013). However, in this case, exploratory research is chosen to investigate and understand a small problem, specific to an identified group at a point in time, with the purpose of making recommendations for improvement. Thus, given the purposes of this study, the allocated time frame and the

available resources, the use of a questionnaire and non-probability/convenience sampling are pragmatic and suitable. The Flipped Classroom, as an education delivery model, is still a relatively new concept (Lipton, 2014). Subsequently, the body of research is not extensive; this has some implication in compiling the literature review. Consideration is given to the fact that the researcher is also the respondents' educator and they may be overly desirous of pleasing. Also, owing to the small sample, it is critical that the entire class be present on the day of the survey (Oxford Journals, [s.a.]).

4.6. Ethical Considerations

This research inculcates the principles of honesty, professionalism, and responsibility in ethical integrity by defending the interests, security, confidentiality and well-being of stakeholders by obtaining informed consent (Stringer, 2008). A consent form is signed by respondents and formal clearance given by the HE institution involved. This protects the stakeholders personally, professionally and in law, as well as safeguarding and promoting the interests of the educational community. Furthermore, the boundaries of research processes/conduct protect the respondents.

5 Perceptions/Results of Flipped Classroom

The questionnaire used to enable data collection and establish respondents' perceptions is made up of thirteen questions. They are organised into three categories: Student Engagement, Active Learning, and Flipped Classroom Tools and Activities. These reflect key components in Flipped Classroom methodology. Each of these relates to a research question, giving clarity/definition to the research problem. In analysing each question, its purpose, results, and findings are scrutinised. The sample consists of 8 respondents.

5.1. Section A: Student Engagement

This section references the research question: *In what way can the Flipped Classroom be used to encourage student engagement?* Three sub-questions (1 – 3) are asked. The first (a closed question) relates to previous experience of the Flipped Classroom. The second refers to student engagement (weighted matrix question made up of 3 associated statements) and the third to varied levels of engagement (weighted matrix question made up of 5 associated statements).

5.1.1. Question 1: Previous Experience of the Flipped Classroom

This question is designed to establish respondents' previous experience of the Flipped Classroom as a tool of education delivery. Figure 5.1 provides a summary of key findings:

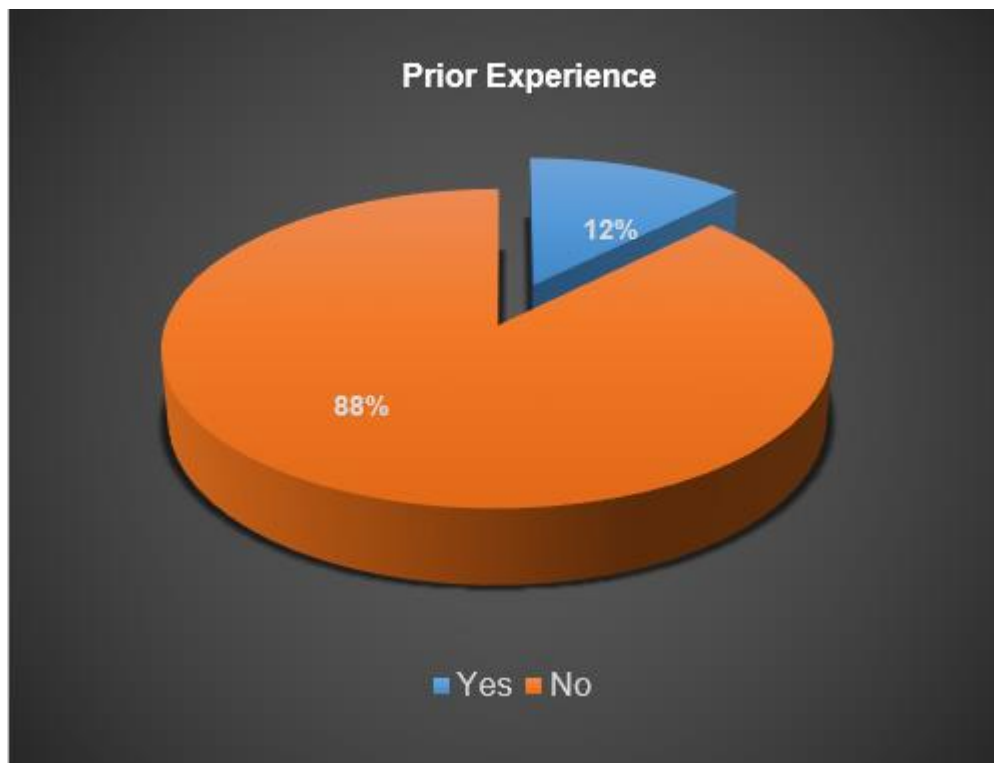


Figure 5.1: Previous Experience of the Flipped Classroom

Results indicate that only 1 of the 8 respondents has been exposed to the methodology before this study, despite the promise of its effect on student engagement. This supports Lamberti's (2016) opinion that the Flipped Classroom is a relatively new practice in South Africa.

5.1.2. Question 2: Student Engagement

To access the benefits of student-centred learning, it is critical to promote engagement in the processes of education (Howe and Strauss, 2003). As indicated in Figure 5.2, this question determines the validity of the Flipped Classroom in this context.

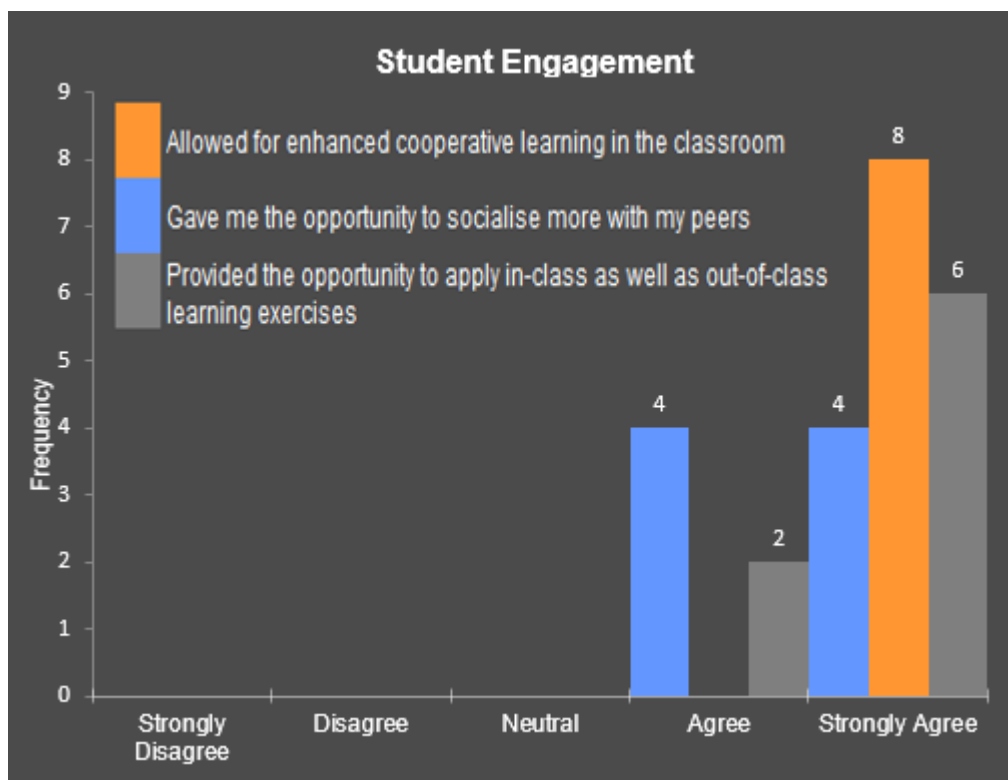


Figure 5.2: Student Engagement

In the Flipped Classroom, respondents shape levels of involvement in the educative process (McLaughlin, Roth, Glatt, Davidson, Esserman and Mumper, 2014), creating meaning around personal experiences, thereby building their own reality (Charmaz, 2006, cited in Lauckner, Paterson and Krupa, 2012). This dictates the high levels of agreement in the three sub-categories, encompassing the supportive, communal approach (4 agree and 4 strongly agree), social preference (8 strongly agree), and varied learning experiences (6 strongly agree), favoured by students (Howe and Strauss, 2003). This is congruent with the view that students' voices must be heard in SA curriculum reform (Shay, 2016). They must be a part of the debate about the design and delivery of material, for the curriculum is for their benefit, in service to them (Evans, 2016).

5.1.3. Question 3: Varied Levels of Engagement

Question 3 relates to participation and associated challenge in the Flipped Classroom's various tasks. It is through these that the self-determination/choice espoused in decolonising the curriculum has reference. In recognising the validity of indigenous content, the interests of Africans are advanced which, in turn, has the promise of resolving the issues of Africa (Evans, 2016).

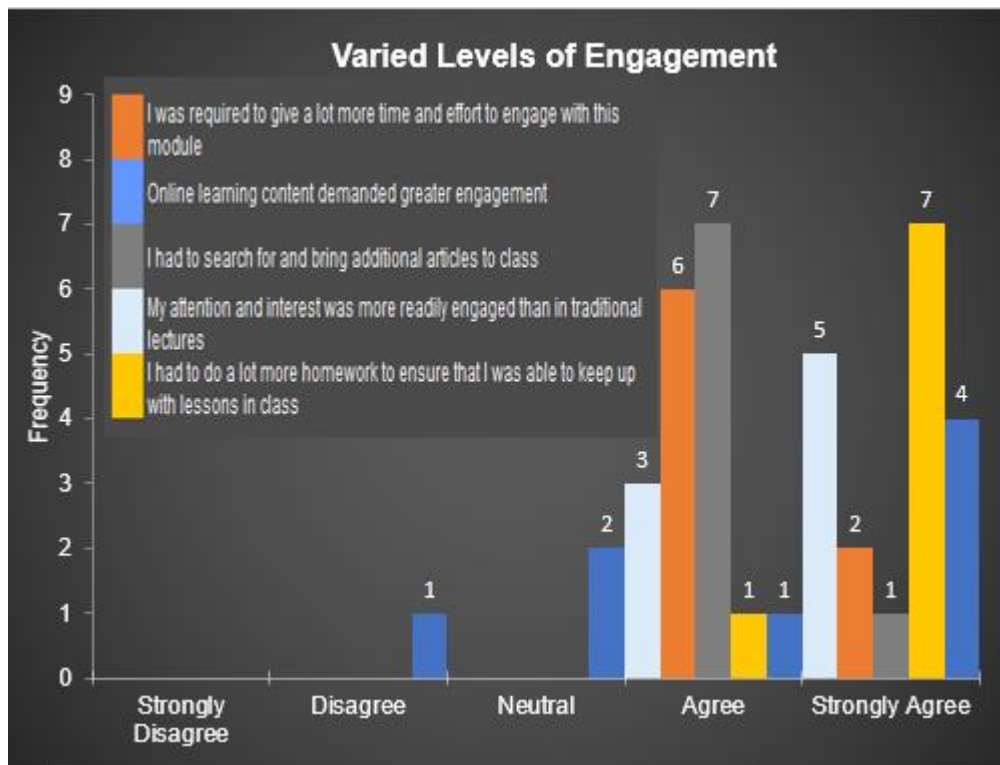


Figure 5.3: Varied Levels of Engagement

The results in Figure 5.3 indicate a preference for learning autonomy. *My attention and interest was more readily engaged than in traditional lectures* garnered 7 strongly agree and 1 strongly agree. Further, although, the Flipped Classroom requires more time and effort than traditional face-to-face learning (strong support for related time-effort constraints, engagement demands, online research expectations and lesser support for homework tasks), this methodology does enhance greater student engagement (as illustrated in Question 2). This brings into question Doyle's (2008) view that students resist student-centred learning as they favour familiar teacher-centred education and their mindsets influence adaptation as they do not like to take learning risks. This is not substantiated here. SA educators are challenged to influence positively the type/quality of learning offered in South Africa and, particularly, to influence engaged students to invest in "life-long" learning, which incorporates and internalises relevant material into their frames of reference (Newmann, 1992) through alternate methodologies. This is in keeping with the push for curriculum reform/decolonisation, albeit, that the promoted independence of students in managing learning tasks could prove a challenge for some (Kamanzi, 2016a.)

5.2. Section B: Active Learning

Here respondents are asked to consider knowledge acquisition to answer the research question: *How does active learning in the Flipped Classroom allow students to relate to learning content?* Four sub-questions (4 – 7) are asked. The first relates to out-of-class tasks (closed-ended question with four fixed answers, for selection of one). The second refers to in-class exercises (closed-ended question with four fixed answers, for selection of one). The third to lecturer involvement (closed-ended question with four fixed answers, for selection of one)

and the fourth to engagement with subject content (closed-ended question with three fixed answers, for selection of one).

5.2.1. Question 4: Out-of-Class Tasks

This relates to respondents' self-management of out-of-class tasks, as applied to the processes of learning. The University of Michigan [s.a.] suggests that active learning promotes higher-order skills of analysis, synthesis, and evaluation. Consequently, blended learning, such as that employed in the Flipped Classroom, has benefits, including improved participation/motivation, personalisation of learning, and the potential for individual growth. This can inform the principle of self-determination espoused in the decolonised curriculum (Shay, 2016).

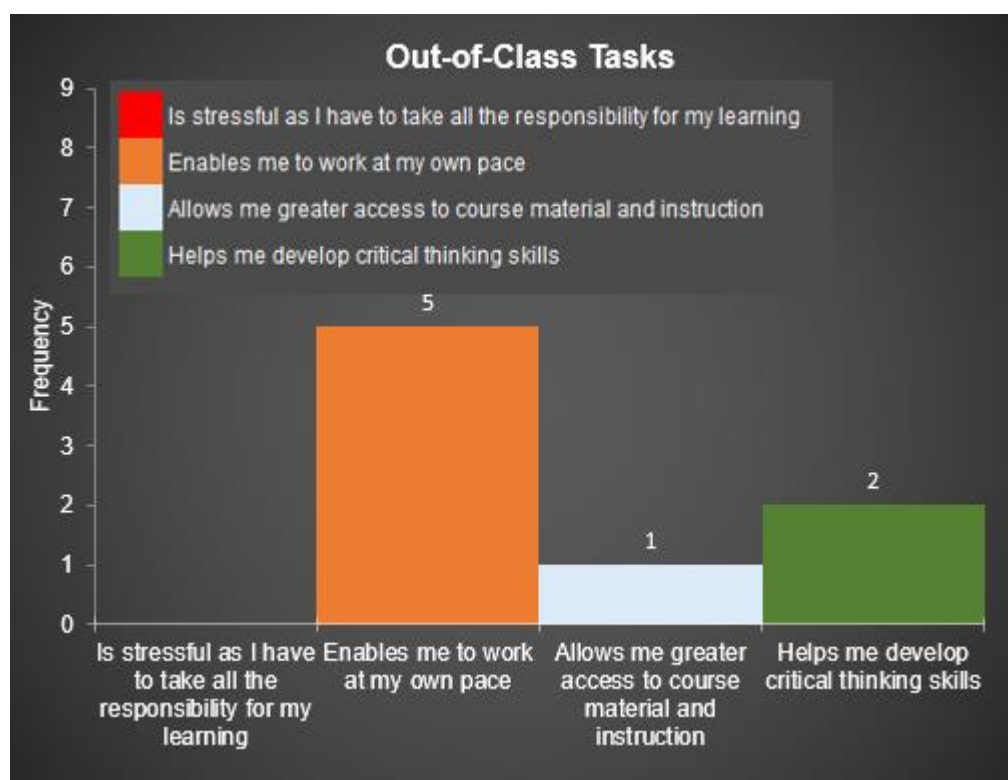


Figure 5.4: Out-of-Class Tasks

Three out of the four statements about out-of-class experiences in Figure 5.4 are positively framed, and this is reflected in the respondents' support, with significant appreciation of the independent pace of study. This autonomy embraces the process and not merely the goal of learning whilst catering for different intelligence levels/learning styles and promoting time management and other life skills (DeNeen, 2013).

5.2.2. Question 5: In-Class Exercises

Analysis of the characteristics of in-class exercises and the respondents' experiences thereof are involved in this question.

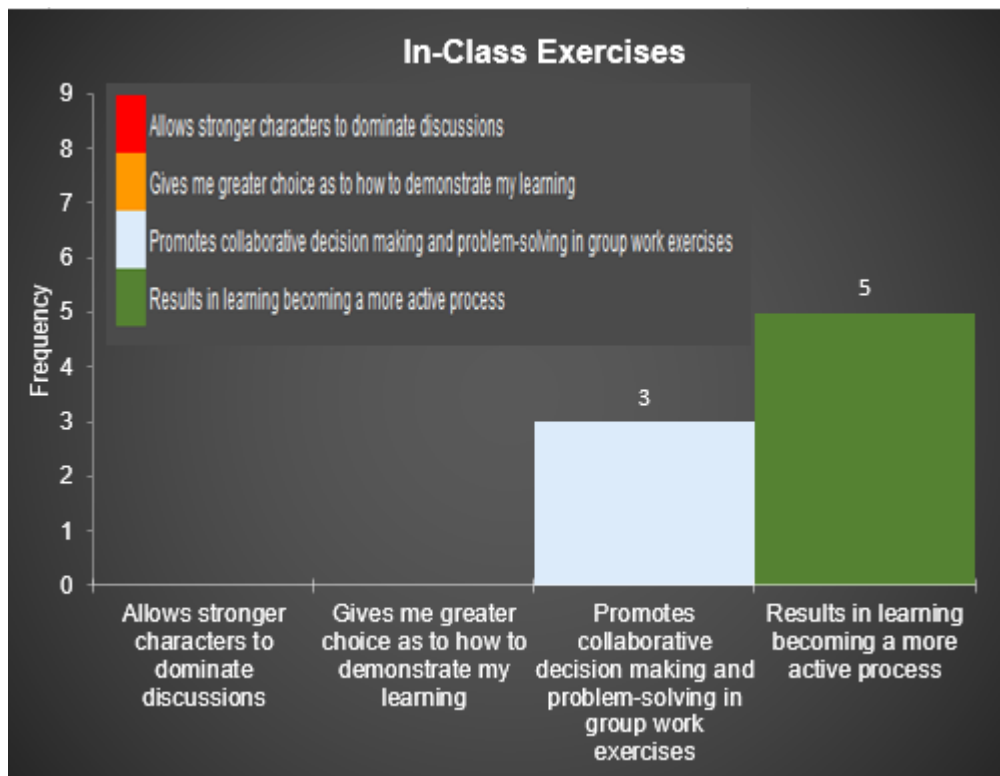


Figure 5.5: In-Class Exercises

Watson (2016) asserts that the Flipped Classroom fosters an enriched learning culture as in-class time allows greater depth in content exploration and creates rich social learning. This is proven by Figure 5.5 with respondents celebrating the collaborative experience (3) and processes of active learning (6). In the context of decolonised education, in-class exercises have a valuable role to play in transforming content as students share their experiences and frames of reference. In so doing, they participate in the current discourse but with personalised individualism.

5.2.3. Question 6: Lecturer Involvement

The lecturer is the facilitator of learning in the Flipped Classroom. Here the respondents' understanding/perception of this was evaluated. Figure 5.6 summarises the results:

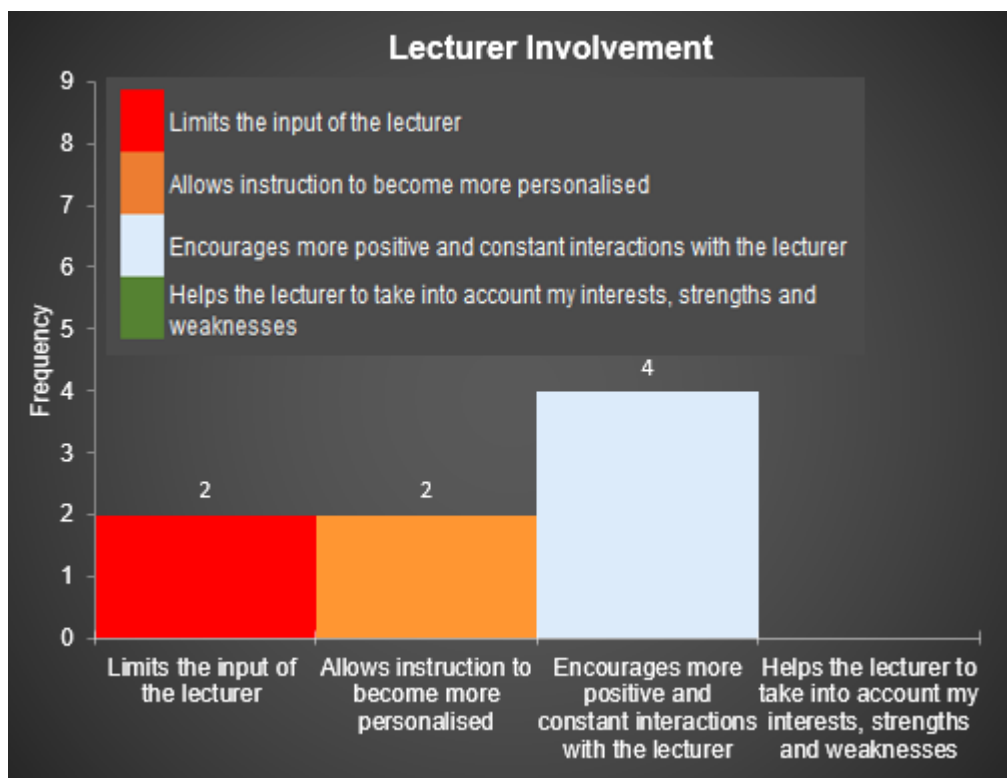


Figure 5.6: Lecturer Involvement

Brame (2013) emphasises the educator's role in the Flipped Classroom as neither superficial nor limited as he/she is responsible for careful preparation/organisation of educational materials, exercises, and environment. Analysis of this question indicates that some respondents (2) were not fully cognisant of the educator's "behind the scenes" role. Whilst the reciprocal interchanges between respondents and educator garnered most support (4). This has resonance in the SA situation as students are questioning the teacher-centric nature of the HE system (Kamanzi, 2016b).

5.2.4. Question 7: Subject Content

The Flipped Classroom exercises in this research study seek to broaden the respondents' knowledge base beyond mere curriculum content. The results in Figure 5.7 ascertain if this is, in fact, the case.

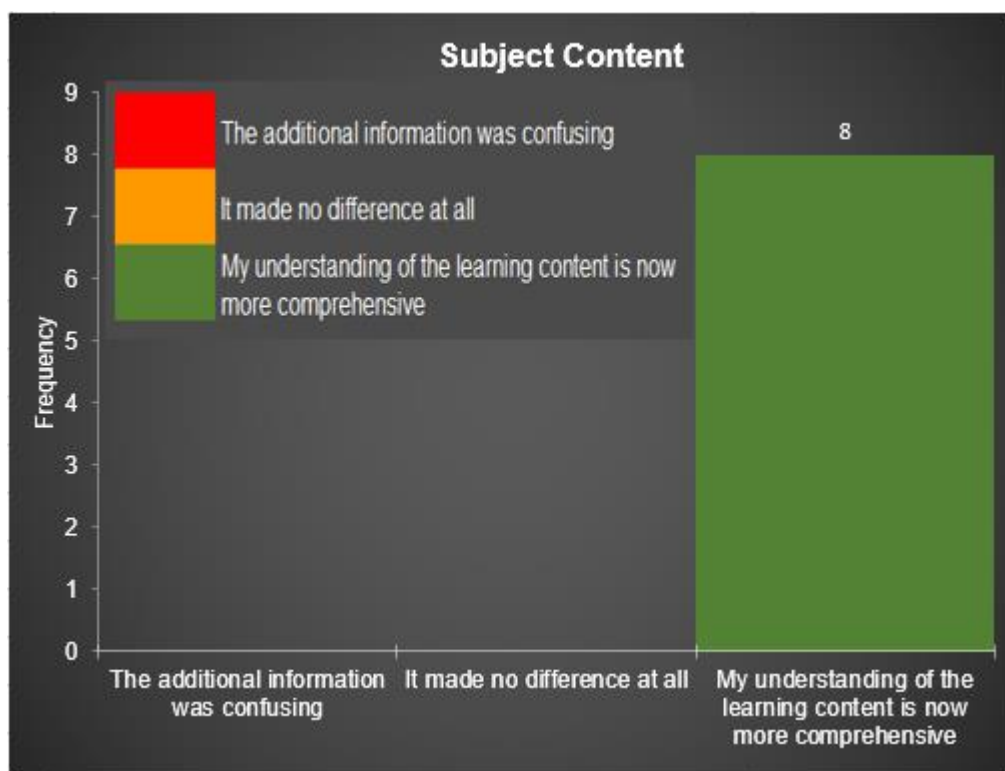


Figure 5.7: Subject Content

Student-centred learning, which is the goal of the Flipped Classroom, engages the principle of constructivism, whereby students build their own knowledge (Papert, 1989). Results show consensus from all respondents. Thus, lending credence to Bransford, Brown, and Cocking's (2000) view that the science of learning accesses a deep foundation of factual knowledge within a conceptual framework, to facilitate retrieval/application. However, students promoting decolonised education maintain that Eurocentric influences in the current curriculum dehumanises black students and impacts course content. They believe that the system and the curriculum should be revise to embrace all frames of reference but that HE institutions must be decolonised first (Evans, 2016).

5.3. Section C: Flipped Classroom Tools and Activities

The Flipped Classroom's multi-modal approach allows for the use of varied exercises, applications, and social media platforms. The following question informs the research study by asking: *What tools or activities related to the Flipped Classroom have the strongest influence in promoting student participation?* Six sub-questions (8 – 13) are asked. Question 8 refers to the online PowerPoint presentation; Question 9 to the YouTube Video; Question 10 to online research; Question 11 to the assessment exercise; Question 12 to group discussion and Question 13 to further impressions/comments. Numbers 8 – 12 are closed-ended questions (with four fixed answers, for selection of one). Number 13 is an open-ended, interpretative comment question.

5.3.1 Question 8: PowerPoint Presentation

In this Flipped Classroom experience, respondents are encouraged to view a PowerPoint presentation on course content. Figure 5.8 indicates their perceptions:

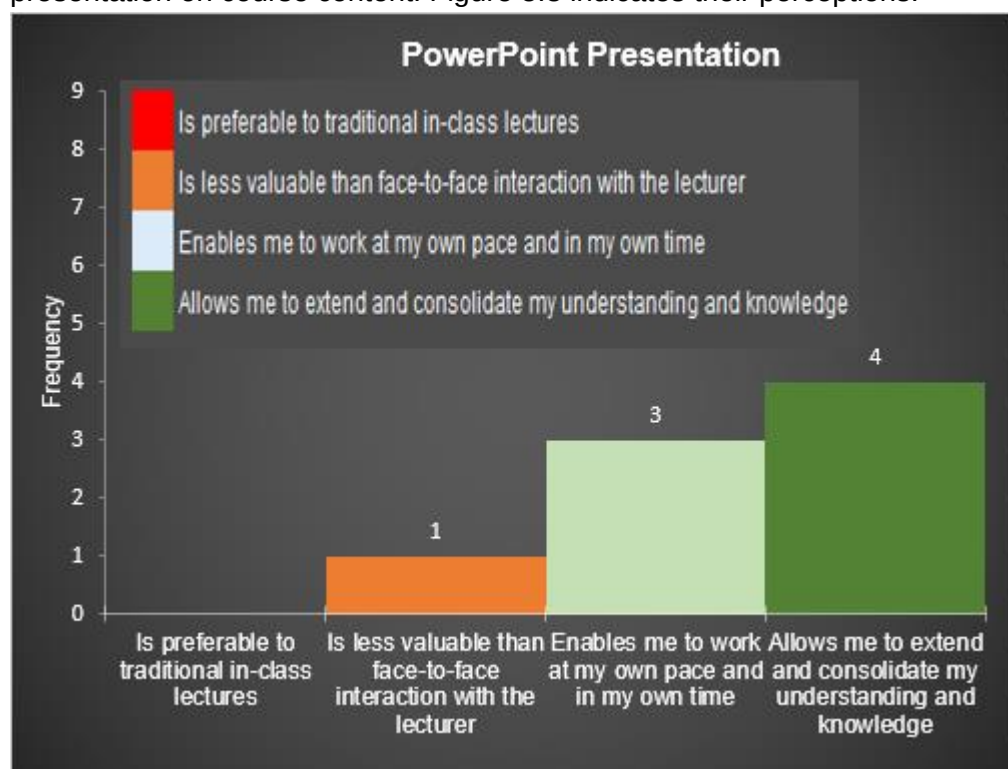
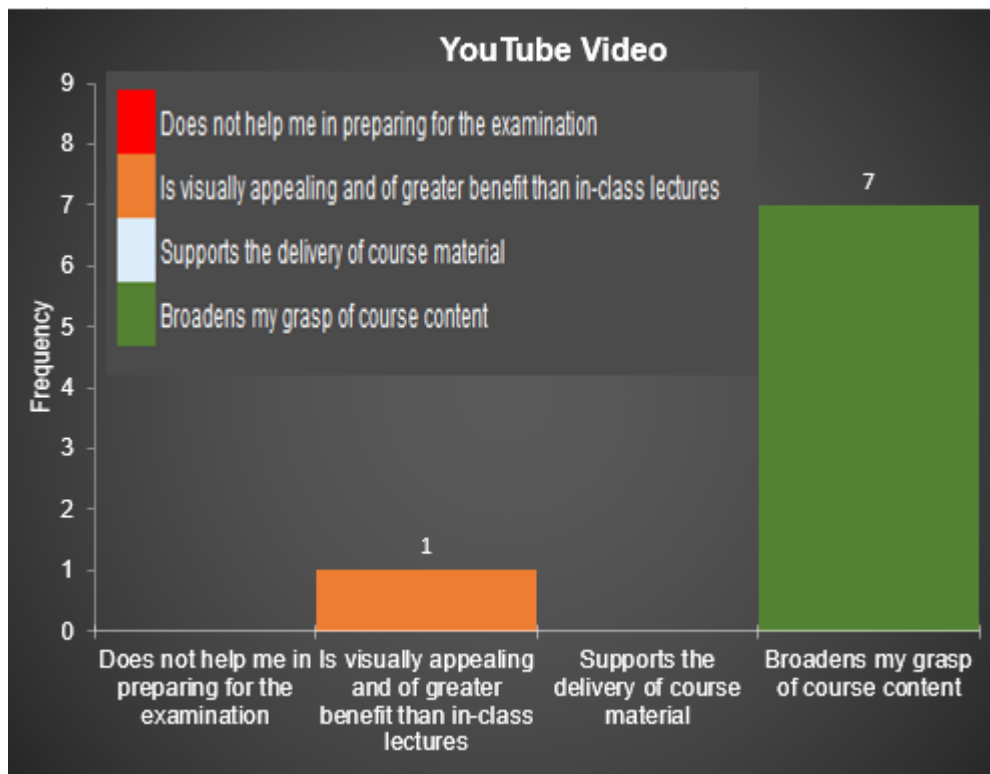


Figure 5.8: PowerPoint Presentation

Perusal of material at home allows for constant/ready access to course content. This offers an alternative format and opportunity for learning and accommodates different learning styles, as promoted by Dwyer, Barbieri and Doerr (1995, cited in Blackboard Support, [s.a.]). Interestingly, 1 student still preferred direct instruction whilst the remaining 7 appreciated the autonomy and consolidation attached to the experience.

5.3.2 Question 9: YouTube Video

This question relates to the efficacy of YouTube videos in the Flipped Classroom.



Question 5.9: YouTube Video

Findings in Figure 5.9 show strong support from 7 respondents. This confirms the view of Cardine (2008) that this kind of application allows for the redefinition of traditional education by engaging students in a format that favours a more technological, modern bent (Howe and Strauss, 2003). Also, using digital presentations caters to different learning styles (Yousef, Chatti and Schroeder, 2014).

5.3.3 Question 10: Online Research

This question relates to the advantage of researching a topic before class. The findings are illustrated in Figure 5.10:

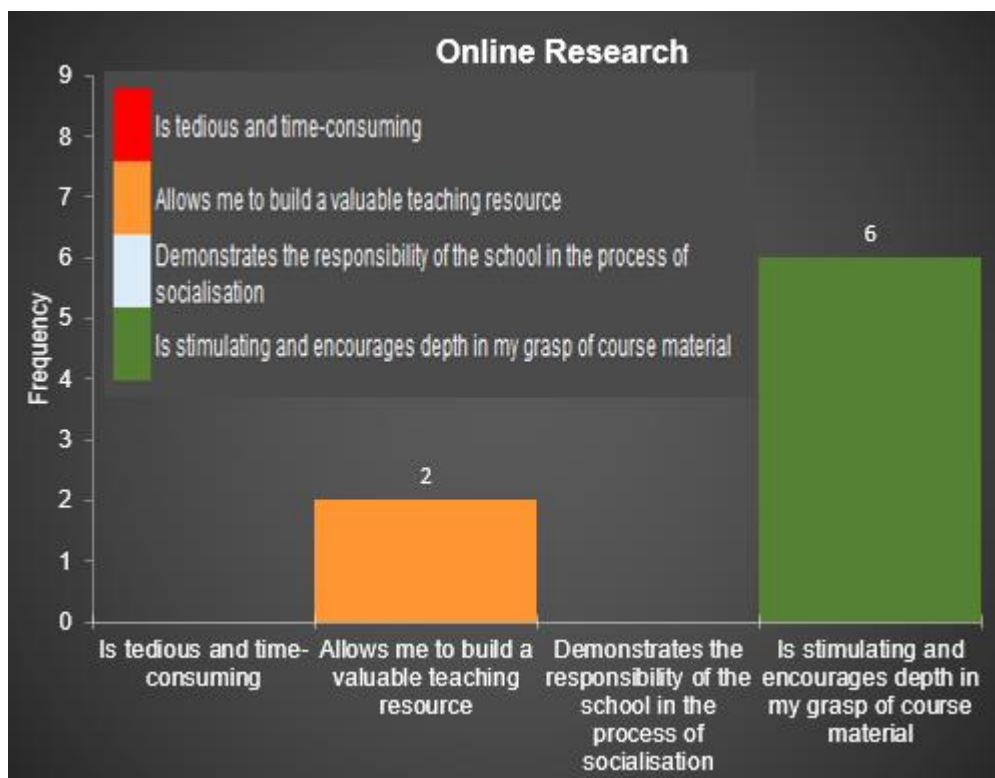


Figure 5.10: Online Research

It is possible for respondents to gain first exposure to material/content prior to class simply by completing pre-class online research (DesLauriers, Schelew, and Wieman, 2011). 6 of the respondents appreciated this as they were then able to build on this knowledge/understanding further in class. However, it is acknowledged that, in this instance, the sources were not African in origin (with the exception of the Study Guide). Promoters of decolonised education assert that local thinkers and writers should be acknowledged (Evans, 2016). Undoubtedly this has merit.

5.3.4 Question 11: Online Assessment Exercise

The benefits of feedback in the learning process are without question (Hattie and Timplerley, 2007) and encompass varied aspects. This question explores the value of online assessment. Findings are provided in Figure 5.11:

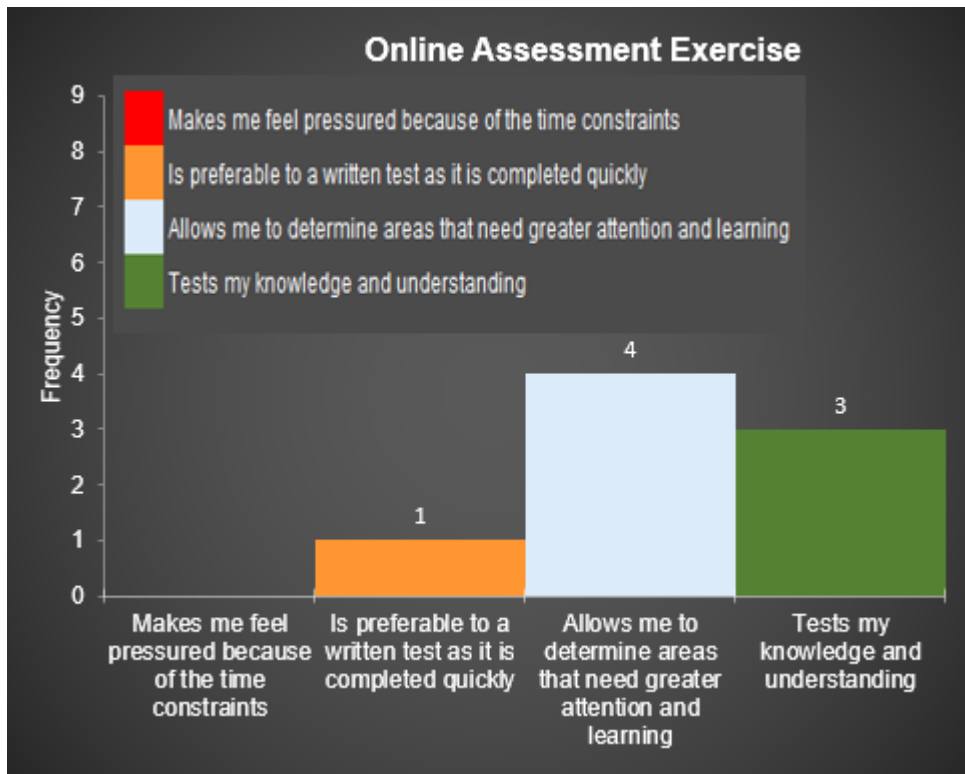


Figure 5.11: Online Assessment Exercise

In the Flipped Classroom, feedback is immediate and fulfils the need to ascertain content acquisition and intervention requirements. Bransford et al (2000) support that allowing respondents to define learning goals and monitor their own progress aids in metacognition. The distribution of results in response to this question reinforces the view that feedback fulfils many needs by allowing respondents insight into the progress of their learning. Personalising the processes of assessment in this way encourages involvement and ownership on the part of students. This approach is supported by those who promote decolonised education, for some critics go as far as to say that current assessment systems promote society's broader inequalities (Shay, 2016).

5.3.5 Question 12: Group Discussion

Question 12 investigates how group discussion utilises students' preference for social learning (Howe and Strauss, 2003).

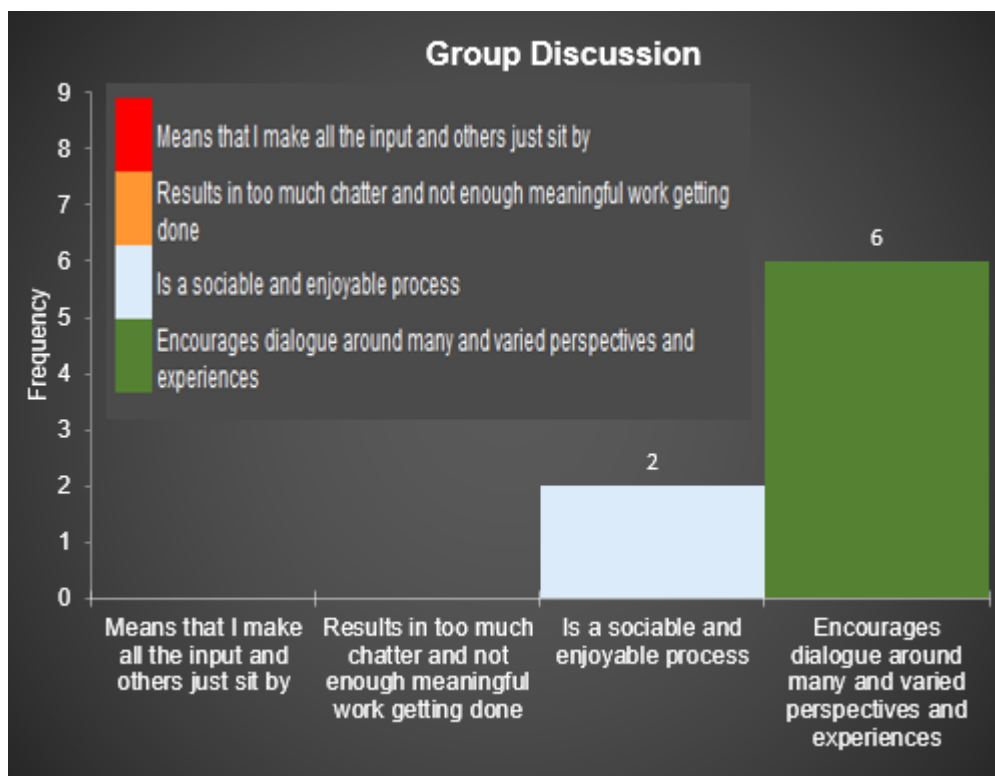


Figure 5.12: Group Discussion

Figure 5.12 indicates how co-operative learning involving small groups allows respondents to maximise others' and their own learning (Johnson, Johnson and Smith, 1991, cited in Palmer, Peters and Streetman, 2003). Evidentially there is strong support (6). The fact that one of the small groups was conducted in Zulu supports the view of Alinah Segobye (ENCA, 2016) who asserts that a necessary element of decolonising the curriculum is the recognition of indigenous languages. Further, in encouraging the expression of others' perceptions and understanding, the neutrality of education is dismissed, allowing for ownership and belief in the processes of education by all (Evans, 2016). This is necessary in curriculum reform.

5.3.6 Question 13: Open-Ended Comment

This open-ended comment question adds contextual value to respondents' perceptions of the Flipped Classroom. Free responses allow them to give personal opinions about this teaching/learning tool extra to other input, thereby providing information not considered by the researcher and lending backing to the research, as promoted by O' Cathain and Thomas (2004). Key findings are presented in Figure 13:

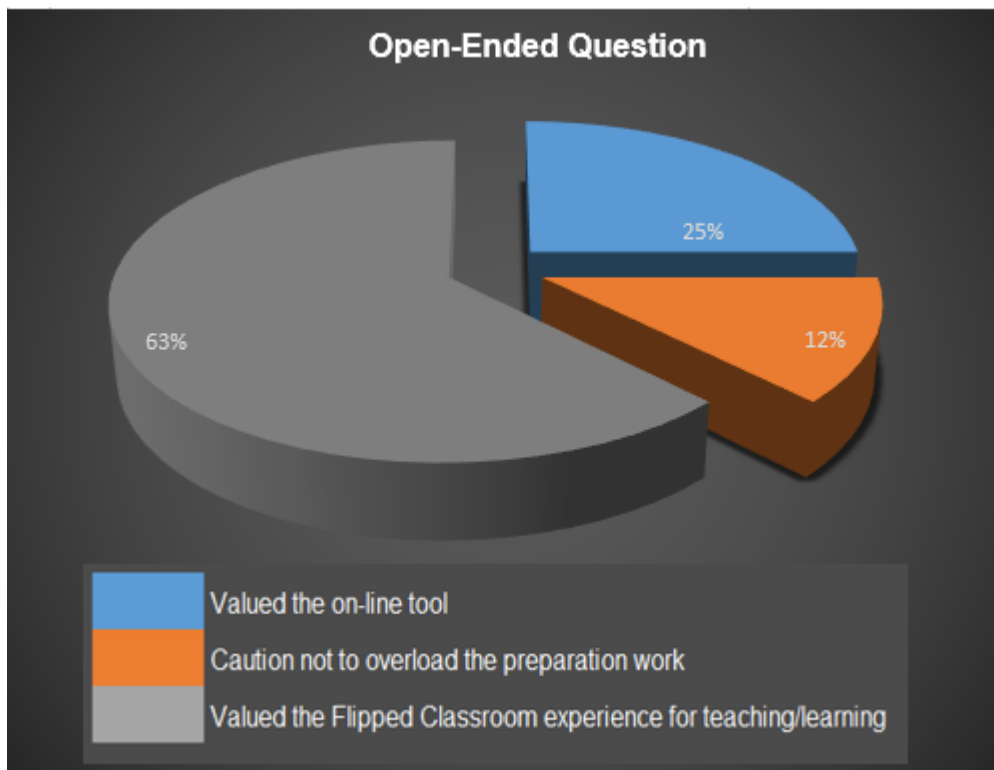


Figure 13: Open-Ended Comment

As there are 8 different responses, it is necessary to codify the individual answers to establish common themes. Appreciation of the design of the online tool/materials is expressed by 2 respondents. This supports the literature of Candella et al (2006) which suggests that passive, one-way transmission of information is no longer adequate in preparing students to meet challenges in their own disciplines. However, 1 respondent says that the Flipped Classroom experience is worthwhile but indicates a reluctance for it to become commonly used, owing to the attendant effort. This reflects the characteristics of today's students who wish to achieve but have the alleged expectation that parents/educators will expedite this (Howe and Strauss, 2003). The remaining 5 respondents value the experience, thereby offering significant weighting to the view that the Flipped Classroom is a meaningful teaching/learning tool. This lends credence to Msila's (2006) assertion that HE should embrace transformational pedagogy that allows students to be active participants in the educational environment, thus moving away from one-directional processes of educator-centred strategies.

6 Recommendations

Further to the research questions, plausible support garnered through this quantitative research indicates that Flipped Classroom methodology has application for the B Ed Programme. Its use is recommended as *enhanced student engagement* confirms suitability and sustainability for HE, particularly in the current SA situation with the drive for greater student voice and autonomy (Shay, 2016). This view is informed by Section A's results. Respondents favour collaborative, social experience and diversity of educational opportunity. However, as exposed in Question 3, there is merit in concern that processes demand significant time/effort. It is proposed that, rather than offering every type of activity for every study unit, one or two activities be provided. Traditional learning elements are, therefore,

retained whilst blended learning opportunities are incorporated incrementally, easing students into a student-centred frame of reference. This progressive improvement is advocated by Fishel and Segal (1998, as cited by Msila, 2006). Implicit in this study's support for student-centred learning is appreciation of students' needs. This has resonance for SA as a relevant curriculum must be accessible (ENCA, 2016) and cater to work-based and specialised skills (Connell, 2016).

Active learning promotes the engaged construction of knowledge (Sukamolson, [s.a.]) and the Flipped Classroom's in-class and out-of-class components foster this, as indicated in Section B. However, in reviewing active learning it must be remembered that content influences students' interest and engagement in and ownership of the educative process. For this reason, students themselves must be involved in determining the relevance of material, for it is they whom education is deemed to serve. In decolonising the curriculum, this role is even more critical (Evans, 2016).

Further to the study, understanding the lecturer's role in creating a stimulating/varied learning milieu needs to be reinforced, as discrepancies are evinced in Question 6. An online support/help line as a further component of the Flipped Classroom can address this; thereby catering to individual student concerns, as deemed necessary by Amory (2015, cited in Kilfoil, 2015). In the decolonisation process, such an initiative would broaden the visibility and accountability of lecturing staff, thereby nullifying the alleged abusive power plays between HE students and unfair academics, as identified by critics of the SA education system (Shay, 2016).

Owing to current upheaval, education transfer in all its aspects is being challenged. Curriculum reform should allow both individual and group identities within the teaching/learning context to democratise learning spaces (Mgqwashu, 2016). The *Flipped Classroom tools/activities* inform blended delivery and are endorsed rigorously. Multi-modal learning, investigated in Section C, adds colour and context to learning, as described by Cardine (2008), and is favoured by students today. Further, the research of Bransford et al (2000) iterates the worth of immediate, independent and individualised assessment which allows students to shape their own learning imperatives. Thus, it is recommended that online assessment, supported in Question 11, be offered with every study unit. Also, it is suggested that groupwork exercises, investigated in Question 12, be used more significantly, with purposeful, structured intent rather than ad hoc spontaneity, thereby maximising the learning process as proposed by Johnson et al (1991, cited in Palmer, Peters and Streetman, 2003).

The related HE institution has articulated a commitment to the introduction of Flipped Classroom methodology. To this end, the researcher will share research findings, to add to the existing body of work on the Flipped Classroom, thereby further informing academic staff as to possibilities/limitations of this teaching and learning tool. Thus, it is seen that the Flipped Classroom holds promise for SA education. Subsequently, there is potential to *expand the scope of research*, particularly in respect of the challenge of enculturating Flipped Classroom methodology. There is also opportunity in a study about technological capabilities of lecturing staff using Flipped Classroom delivery.

It is pretentious and unrealistic to suggest that introduction of Flipped Classroom methodology counters the dilemmas of SA higher education in one fell swoop. However, as supported by

this research, the Flipped Classroom does garner significant buy-in and participation; students perceive their views, needs and preferred styles of learning as being accommodated. Thus, indicating relevance and accessibility, both which benefit curriculum reform and fit with current demands (Shay, 2016).

7 Conclusion

This exploratory research, into the advantages of the Flipped Classroom as a tool to enable student engagement, is designed to address specific questions around an educational scenario at an identified time. Its intrinsic purpose is to improve delivery of the Social Development Module through best practice. The results confirm the research problem and, thus, the legitimacy of this methodology is enhanced. The needs of students today, and the SA education climate, predicates towards a more active, engaged and student-centred HE system, wherein personal responsibility, accountability and independence are encouraged (Kamanzi, 2016a). Nevertheless, the introduction of Flipped Classroom methodology would need to be incremental at most HE institutions, as the majority of students will have experienced traditional learning environments and the cultural context, cross-fertilisation and debate of the decolonised classroom would be foreign to them. Despite this, the Flipped Classroom, with its diverse and multi-modal approach, lends itself to the goal of decolonisation in South Africa and holds the promise of relevant and real change.

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Questionnaire

Dear Respondent

I would like to invite you to participate in a research study on **Exploring the use of the Flipped Classroom as an Education Delivery Method**. Completing the related questionnaire shall take 15 minutes of your time.

This exploratory study is designed to establish if this alternative teaching and learning practice influences engagement and participation in the module, Social Development.

The flipped classroom is an innovative pedagogical method, which employs out-of-class activities, such as video lectures and practice problems, and in-class active, application-based individual or group work.

Participation in the research study is voluntary but your contribution would be valued and highly appreciated. Should you feel uncomfortable at any stage, you may withdraw from the process without prejudice or penalty. The questionnaire is anonymous and all reasonable steps shall be taken to respect and ensure confidentiality. Information shall be used for the purposes of research only.

Please read the questions and answer as directed in each case. You may be asked to tick the correct box, rank a series of statements or write a comment. Please answer all the questions.

Data from completed questionnaires shall be collated and analysed. Research findings shall be shared with you upon request.

Please feel free to contact me should you wish to find out any more about the research.

Thank you most sincerely

A handwritten signature in black ink that reads "Barbara Daniel". The signature is written in a cursive style with a horizontal line underneath.

BJ Daniel

Mobile: 082 7895597

Email: bdaniel@stmartinspreprimary.co.za

Flipped Classroom Questionnaire

Please answer all the questions

Student Engagement

1. Prior to this, had you experienced flipped classroom methodology in any other module? Please tick the relevant option.

	Yes
	No

2. The following statements refer to student engagement in the flipped classroom. In each case, tick the most relevant box. The flipped classroom:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a) Allowed for enhanced cooperative learning in the classroom					
b) Gave me the opportunity to socialise more with my peers					
c) Provided the opportunity to apply in-class as well as out-of-class learning exercises					

3. As a teaching strategy, the flipped classroom requires more interaction by students. The following statements reflect varied levels of engagement. In each case, and based on your view and experience, tick the most relevant box. In the flipped classroom:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a) I was required to give a lot more time and effort to engage with this module					
b) Online learning content demanded greater engagement					
c) I had to search for and bring additional articles to class					
d) My attention and interest was more readily engaged than in traditional "chalk and talk" lectures					
e) I had to do a lot more homework to ensure that I was able to keep up with lessons in class					

Active Learning

4. These statements refer to out-of-class tasks. Select ONE statement with which you agree most.
The flipped classroom:

	Helps me develop critical thinking skills
	Allows me greater access to course material and instruction
	Enables me to work at my own pace
	Is stressful as I have to take all the responsibility for my learning

5. These statements refer to in-class exercises. Select ONE statement with which you agree most.
The flipped classroom:

	Promotes collaborative decision making and problem-solving in group work exercises
	Results in learning becoming a more active process
	Allows stronger characters to dominate discussions
	Gives me greater choice as to how to demonstrate my learning

6. These statements refer to lecturer involvement. Select ONE statement with which you agree most.
The flipped classroom:

	Limits the input of the lecturer
	Encourages more positive and constant interactions with the lecturer
	Helps the lecturer to take into account my interests, strengths and weaknesses
	Allows instruction to become more personalised

7. Indicate below how the flipped classroom influenced the way in which you related to subject content:

	My understanding of the learning content is now more comprehensive
	It made no difference at all
	The additional information was confusing

Flipped Classroom Tools and Activities

8. These statements refer to the flipped classroom's out-of-class, online PowerPoint Presentation. Select ONE statement with which you agree most. Online material:

	Allows me to extend and consolidate my understanding and knowledge
	Is preferable to traditional in-class lectures
	Enables me to work at my own pace and in my own time
	Is less valuable than face-to-face interaction with the lecturer

9. These statements refer to the flipped classroom's out-of-class YouTube Video. Select ONE statement with which you agree most. Accessing related digital material:

	Broadens my grasp of course content
	Is visually appealing and of greater benefit than in-class lectures
	Does not help me in preparing for the examination
	Supports the delivery of course material

10. These statements refer to the flipped classroom's out-of-class, online research into the role of the school in the socialisation of young children. Select ONE statement with which you agree most. Finding online material:

	Is stimulating and encourages depth in my grasp of course material
	Demonstrates the responsibility of the school in the process of socialisation
	Allows me to build a valuable teaching resource
	Is tedious and time-consuming

11. These statements refer to the flipped classroom's out-of-class, online Assessment Exercise. Select ONE statement with which you agree most. Completing the online quiz:

	Tests my knowledge and understanding
	Allows me to determine areas that need greater attention and learning
	Is preferable to a written test as it is completed quickly
	Makes me feel pressured because of the time constraints

Flipped Classroom Questionnaire

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12. These statements refer to flipped classroom's in-class, group discussion on the consequences of poor social integration. Select ONE statement with which you agree most. Discussing the effects of aggression, withdrawal and isolation in a group:

☐	Encourages dialogue around many and varied perspectives and experiences
☐	Is a sociable and enjoyable process
☐	Means that I make all the input and others just sit by
☐	Results in too much chatter and not enough meaningful work getting done

13. Please use the space below to add any further impression/comments about the flipped classroom as a teaching and learning tool.

Thank you for your participation