

Using practice questions based on Bloom's taxonomy to improve quality of learning of block release students in Zimbabwe: A case study of public policy analysis module¹

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ABSTRACT

The paper observes that nearly all universities in Zimbabwe offer crash academic programmes that are commonly referred to as block release because students attend their face-to-face classes for a short space of time. The Covid-19 pandemic has intensified the use of block release. During block release sessions, students are taught all the course content for the whole semester which usually includes four courses. After the intensive face-to-face lessons, students are expected to write their assignments and then come back to write their final examinations at the end of the semester. The paper contends that the block release mode of instruction is typical distance education and therefore requires continuous student-instructor interaction through use of well-planned practice questions based on the course syllabus. To be effective, the paper suggests that the practice questions should be based on Benjamin Bloom's taxonomy of questions. The questions focus on key verbs which include remember (or recall), understand, apply, analyse, evaluate and create. This approach enables students to master various types of knowledge which are factual, conceptual, procedural and metacognitive. The paper uses illustrative questions from public policy analysis which is a relatively new discipline in the context of Zimbabwe. The illustrative questions can also be applied across disciplines such as Family and Religious Studies, History and Geography.

Keywords: block release, distance teaching, student support

INTRODUCTION

Zimbabwe has a total of 20 fully functional private and public universities. In terms of mode of education delivery, all of them are conventional universities except the Zimbabwe Open University which is the only distance teaching university in the country. Yet nearly all the conventional universities in Zimbabwe have adopted part-time mode of education which is commonly referred to as block release. The Covid-19 pandemic has intensified the use of block release. In short, block release has become a form of distance education whereby students meet the lecturers for a short period ranging from two weeks to one month for face-to-face teaching at an agreed venue in a given semester. During this period, students cover their

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courses for the required number of contact hours ranging from 45 to 48 depending on the university. While the number of hours that are stipulated in the general regulations are covered, the teaching – learning process is hurried and intense. Since this teaching process does not give students adequate time for digesting and processing the material covered, it is most unlikely that all students would have grasped the delivered material. After the intense classes, students are expected to go and read the work covered. In addition, the learners are expected to write their assignments as well as coming back to write end of semester examinations. However, we contend that the current block release mode of instruction is an inadequate mode of instruction and therefore requires retooling by applying principles of distance education especially continuous engagement with the learners after face-to-face block release teaching. In this practice-based paper, we demonstrate how university instructors can enrich their block release teaching by using revision questions based on Benjamin Bloom’s taxonomy as distancing teaching tools. Before presenting our teaching experiences using revision questions, we delineate our methodology.

METHODOLOGY

Unlike empirical research articles that have a common writing approach or methodology, conceptual papers which include practice-based articles have often had debatable approaches as ‘researchers struggle to design and write non-empirical articles because of the lack of commonly accepted templates to guide their development’ (Jaakkola, 2020: 18). After observing absence of broadly acceptable framework to write non-empirical papers, Whetten (1989) suggested seven criteria that should be used to assess suitability of conceptual or theoretical papers. These criteria are in form of seven questions as follows:

1. Does the paper contribute novel and substantial value to current knowledge and thinking in a given area?
2. Will the recommended practice or approach likely to change organisational processes in a given area?
3. Are the authors’ assumptions, views, underlying logic and evidence convincing?
4. Does the article demonstrate grounded and sustained thinking and thoroughness in a given area?
5. Is the paper clearly, logically and professionally written?
6. Is the topic current and will it stimulate new discourses in the area?
7. Is the paper appealing and is it likely to attract wide readership?

Whetten (1989) concluded by arguing that a paper may not have to address all the foregoing questions but should strive to answer most of the questions for it to be taken seriously. While the questions do not provide a specific format to write a conceptual paper, they stimulated our thoughts to write such a paper.

The specific methodology to write this paper was partly based on guidelines presented by the *Voluntary Sector Review* (2017), a journal published by Bristol University Press. The journal says that a practice-based paper should have five key sections. First, the paper should state the issue or problem to be addressed and then explain why the issue or problem is important. Second, the paper should explain the basis for the claims the author is making based on literature, theory or empirical research. Third, in the main body of the article, key lessons learned from experience or other activities should be presented. Fourth, the paper should discuss the implications of the suggested or recommended solutions. Finally, the article should conclude by emphasising how the article should enable readers to better respond to the challenges or questions raised at the beginning.

The Africa Virtual University (2017) also gave the authors insights into writing conceptual articles. The University presented a template for scholars to present their practice-based papers with special reference

to conference papers. In this regard, the University says that the first step is to state the problem to be addressed or the opportunity to be exploited. This step should also include how the problem is impacting on the target audience or population. The second step is to design and implement a strategy to deal with the problem identified in the first stage. The third step is to assess the impact of the strategy implemented in the previous stage. At this stage, the focus will be on concrete results achieved in terms of outputs and outcomes. The fourth step focuses on lessons learned while the fifth and final step presents conclusions and recommendations. The focus in the final stage is to infer if the intervention has been successful and to make recommendations for future practice.

Based on the foregoing frameworks of presenting conceptual and practice-based papers, this paper used a synthetic approach which was developed by the authors. Accordingly, our first step is to outline problems associated with block release teaching. Our second step is to delineate the importance of using fully-fledged distance teaching approach as a strategy to improve block release teaching. In addition to distance teaching, the paper recommends use of revision questions based on Bloom's taxonomy to enrich distance teaching of block release classes. In the third step we show the results of our strategy by presenting the actual Bloom-based revision questions we crafted and used to teach our public policy classes. The final step is on implications for practice. We summarise the approach we used to write this paper in Figure 1.

*Figure 1:
Synthetic model of presenting practice-based paper*

Step 1: Problem: Block release as an instructional approach

Step 2a: Recommended Strategy 1: Strengthening block release teaching by infusing broad-based distance teaching instruction

Step 2b: Recommended Strategy 2: Writing and strengthening block release revision questions based on Blooms taxonomy

Step 3: Results: Bloom's taxonomy-based revision questions used in practice

Step 4: Implications for practice

THE PROBLEM: BLOCK RELEASE AS AN INSTRUCTIONAL APPROACH

A close analysis of block release as a form of instruction shows that it is a form of distance education given that the key feature of distance education is learning which takes place when the student and the teacher are geographically separated with occasional face-to-face interaction. Zigerell (1984: 10) succinctly defined distance education as a form of instruction characterised 'by the physical separation of teacher from student, except for the occasional face-to-face meeting.' Today, most distance learning involves e-learning with or without face-to-face learning. However, from Zigerell's definition it is clear that block release is a form of distance education since the students and the instructors meet only for short period of time - at most a month in a semester. In this regard, it is clear that there is a long period of separation between the institution and the learners. Yet unlike formal distance education which has learner support mechanisms after face to-face instruction, most block release programmes do not have known learner support services except in a few cases whereby lecturers communicate with their students via several e-learning platforms such as Moodle. Therefore, to ensure block release mode of instruction is effective, this paper contends that block release programmes should enhance student learning by incorporating practice questions based on Bloom's taxonomy of questions. These questions would ensure that crash teaching during block release is enhanced by spaced learning throughout the semester. In fact, research has shown that spaced learning or distributed practice enhances student subject matter retention (Benjamin

& Tullis, 2010). In the next section we discuss distance education as a strategy to enhance teaching and learning for block release students.

RECOMMENDED STRATEGY 1: DISTANCE EDUCATION AS A STRATEGY TO ENHANCE TEACHING AND LEARNING FOR BLOCK RELEASE STUDENTS

Concept of distance education

Distance learning became an important part of the education process in many countries in the mid-20th century and its popularity is growing especially with the advent of e-Learning. Distance education or learning at a distance is education of students who are not always present at a school, college or university. In this regard, the students and the instructors are often physically separated. Traditionally, distance education was often referred to as correspondence education since most of the communication was via the post. However, today distance education now uses several forms of media such as online learning or e-learning. As a result, most distance education institutions now use a mixture of traditional face-to-face instruction and e-learning resulting in what is often referred to as hybrid or blended hybrid (Tabor 2007) or blended learning or education (Vaughan, 2010).

What is critical in modern distance education is that the student and the instructor should interact throughout the semester. This interaction is what is critical in any education transaction. This point is emphasized by Shale and Garrison (1990) when they say that in its fundamental form, distance education is an interaction among the student, instructor and subject content. This point is stressed by Moore (1993) who noted that a transactional distance in distance education is whereby the instructor and the learners do not interact in the same physical learning environment and temporal space. Therefore, to reduce the negative effect of the transactional distance, Moore came up with three types of interaction essential for learning to take place in distance learning. The first is the learner content interaction which involves getting learning materials from the instructor or institution. In this regard, the learning material which is provided could be in form of audio or video tape, CD-ROM or online communication. The second is learner-instructor interaction which involves the interaction between the students and the instructor. This mode of interaction entails the lecturer sending quizzes, questions or assignments to learners. This also includes communicating critical information to the student or providing useful feedback to the learners. In addition, the student and the instructor can ask each other questions. The lecturer can also communicate important course information to students. The third is the learner – learner interaction which is an important element of distance education. Student-student interaction is whereby learners exchange vital information and ideas about the course. This can take place when the instructor is absent or present. It can take place during class discussions. Student-student discussions can also take place during small group discussions. This type of interaction enhances the learning process through student collaboration and knowledge sharing. The current authors observed that the foregoing interactions observed by Moore (1993) are absent in most block release programmes. One explanation for this is that the majority of lecturers in conventional universities in Zimbabwe are not trained to use the distance education mode. Yet given the preponderant use of block release model of delivery, it is essential that student receive continuous support throughout the semester.

Nature of student support services in distance education

As an instructional delivery system, distance education does not compel learners to be physically present where the instruction is delivered. Instead, students can still receive instruction wherever they are. For example, distance education can be delivered through technology. In some cases, it is delivered through written materials in form of modules. However, in most universities distance education involves limited face-to-face instruction at a given venue followed by student self-study at home. To make institutional delivery more effective, distance learning involves the provision of support services. These support services help to meet the various learning needs of students. As observed by Stewart (1993), student support

services are a critical component of distance education as they encourage the growth and development of the learners. In fact, any meaningful distance education should have a robust student support service. As noted by Rumble (2000), distance educators are now aware of the criticality of student support services to avoid traditional correspondence mode of distance learning which was prevalent in 1960s.

Today the success of distance education now depends on the nature of student support that is provided. Accordingly, the provision of varied and adequate student support services has become an important component of distance education as it provides a conducive learning environment to students learning at a distance. In well-endowed institutions, the range of student support services is wide and different. The definitions of student support services in distance education are also numerous, for example, Simpson (2000) views student support services as all activities that facilitate student learning and development. This definition, of course, excludes the learning materials such as modules. The support services embedded in Simpson's definition focus on cognitive, intellectual and organizational support. According to Garrison (1989) student support services in distance education include library services, Internet and software programmes and a range of human and non-human resources that facilitate student learning and development. In this regard, Farajollahi, and Moenikia (2010: 4452) say that 'Student support services are the provision of assistance to meet students' needs'.

Need for continuous student support for block release programmes

The previous section demonstrated the importance of student support services in distance education. Yet as earlier highlighted, block release as a form of distance education does not have specified student support services after face-to-face sessions. The main argument could be that the face-to-face contact hours for most block programmes are enough. However, we contend that effective learning under block release is hampered by the fact that it is too loaded with some programmes covering four courses in three weeks resulting in what is referred to as massed practice. APA Dictionary of Psychology (2020) defines *massed practice* as learning or training sessions that are often long and intense. Massed practice is opposed to what Simmons (2012) calls *distributed practice* which uses shorter and generally less intense teaching and learning sessions. *Distributed practice puts emphasis on spacing of content of a lesson*. In fact, the psychology of lesson planning calls for adequate spacing of content. In this regard, Smolen, Zhang and Byrne (2016) say that one strategy to enhance mastery of what is taught is to increase the gaps of time between learning episodes. This is called the 'spacing effect' or 'distributed practice' (Benjamin & Tullis, 2010) which refers to spacing out learning activities over time. According to Smolen, Zhang and Byrne (2016) this phenomenon has the potential to increase retention of learning considerably for students in schools, colleges and universities.

Several studies have revealed that spaced learning (distributed practice) consistently and robustly enhances long-term retention of subject matter by students (Janiszewski, Noel & Sawyer, 2003). For instance, it has been established that it improves learning of names (Carpenter & DeLosh, 2005), learning of vocabulary (Kornell, 2009), fact learning (Rawson & Kintsch, 2005), learning of mathematical concepts (Rohrer & Taylor, 2007) and learning of musical skills (Simmons, 2012). A study by Kapler, Weston and Wiseheart (2015) found that spaced learning for undergraduate students led to lasting benefits with respect to factual learning.

As a pedagogical approach, the main advantage of spaced learning or distributed practice is that it gives time for the lecturer to provide feedback. It also provides the student with ample time for reflection. Distributed practice is consistent with traditional scheduling of classes in conventional universities where lessons for each course are spread over the semester. However, the other approach – massed practice, is a crash programme which is consistent with block release mode of learning. The main disadvantages of massed practice are that there is not enough time for the lecturer to provide feedback and it is too demanding and leads to learner fatigue.

Given the research evidence on the efficacy of spaced learning, there is need for universities to enable students to continue learning even after the crash programme (massed practice) which often takes two weeks to one month to cover four courses which should ordinarily be taught in 10-12 weeks in a traditional face-to-face instructional mode. It is therefore our contention that revision or practice questions and other assignments should constitute part of the additional instructional activities for block release programmes. The other activities could be e-Learning consisting of quizzes and additional exercises. These activities would enable learning to take place long after the crash programme.

Importance of practice questions after block release crash programme

We view block release as a crash programme (massed practice) which is an intense form of instruction used by most universities in Zimbabwe to deliver some of their courses in a given semester. Therefore, to ensure continuous learning throughout the semester, we recommend use of planned practice questions to guide the students to revise content covered during the block. We also view practice questions as additional learning activities. In the context of this paper, practice questions are unique because they are detailed and attempt to cover the whole syllabus of a given module instead of focusing on a few topics. In fact, the authors are of the view that practice questions should cover the whole syllabus to prevent narrow coverage of a module. After going through all the practice questions, the student should be able to address key aspects of a module.

The authors have often found practice questions as a useful teaching and learning enhancing strategy when teaching block release classes. Most importantly, practice questions enable students to focus on cardinal aspects of the course throughout the semester. In fact, several scholars have also echoed the importance of practice questions, for example, Fofade, Elsner and Haines (2013) noted that practice questions are important because they:

- assess students' mastery of knowledge
- promote comprehension
- stimulate critical thinking
- generate discussion among students
- increase higher order learning
- stimulate independent learning
- assess students' preparation
- actively involve students in the learning process
- assess mastery of course objectives.

Our experience as lecturers on the block release classes has shown that practice or revision questions based on the syllabus help students to:

- read widely beyond the syllabus
- respond to questions with well thought out answers
- think deeper
- connect lecture material to real world ideas and events
- cover the whole syllabus
- focus on important themes and concepts in a module
- exchange ideas with the lecturer as the students are free to seek clarification of the practice questions provided.

It is clear from the foregoing that the practice questions are a useful student support strategy for deep learning for block release students. In fact, continuous engagement with the course material throughout the

semester definitely enhances student's mastery of the course material. Therefore, in the next section, we explain how an instructor can plan practice questions that enhance student learning.

RECOMMENDED STRATEGY 2: WRITING AND STRENGTHENING BLOCK RELEASE REVISION QUESTIONS BASED ON BLOOM'S TAXONOMY

To ensure effective learning for students, practice questions should be well crafted. One strategy we encourage instructors to use is to classify assignment questions according to students' cognitive level. This approach is embedded in Bloom's hierarchical approach to cognition. Bloom's original taxonomy of questions had six levels consisting of recall, comprehension, application, analysis, evaluation and synthesis questions. However, according to Anderson and Krathwohl (2001), the taxonomy was revised in 2001 where the synthesis questions became create questions. The new taxonomy of questions is shown in Table 1. The lowest level of the taxonomy is the remember questions while the highest level is the create questions. The instructor's task is to vary questions focusing on addressing various levels of cognition starting with basic remember or recall questions. The lecturer can combine the questions in each set of assignments. However, it is expected that the first set of questions will be simple recall questions. For illustrative purposes, we have used public policy analysis questions meant for students taking a course in public policy analysis for a Master's degree programme. We deliberately chose public policy because this field of study is still in its infancy in Zimbabwe.

Table 1
The Cognitive Processing Dimension of the Revised Bloom's Taxonomy

Dimension	Examples of the cognitive processes involved
Remember: can the student recall or remember the information?	Define, duplicate, list, memorize, recall, repeat, reproduce state
Understand: can the student explain ideas or concepts?	Classify, describe, discuss, explain, identify, locate, recognize, report, select, translate, paraphrase
Apply: can the student use the information in a new way?	Choose, demonstrate, dramatize, employ, illustrate, interpret, operate, schedule, sketch, solve, use, write
Analyze: can the student distinguish between the different parts?	Appraise, compare, contrast, criticize, differentiate, discriminate, distinguish, examine, experiment, question, test
Evaluate: can the student justify a stand or decision?	Appraise, argue, defend, judge, select, support, value, evaluate
Create: can the student create new product or point of view?	Assemble, construct, create, design, develop, formulate, write

Anderson, L. (2006) in Pickard, M.J. (2007: 48)

RESULTS: BLOOM'S TAXONOMY-BASED REVISION QUESTIONS USED IN PRACTICE

In this section we present the actual revision questions we have often used to teach our block release classes in public policy. As stated earlier, the questions are based on Bloom's taxonomy.

Remember questions

Remember or recall questions simply ask the student to remember the facts that the students have memorised. Remembering facts is considered to be the lowest level of cognition. At this level the students are simply required to give definitions, examples, summarise some information or to classify items. At this level,

common question stems include words like define, identify, recognise, name, label, locate and list. In this regard, we have found the following questions useful at this level:

- i. Draw a labelled diagram showing the policy making process based on the James Anderson model.
- ii. Define policy evaluation and policy analysis.
- iii. Outline the main features of the elite theory of public policy making.
- iv. Identify the official and unofficial policy makers in your country.
- v. Describe the various levels of policy making.
- vi. Identify types of public policies and policy analysis.

Understand/Comprehension questions

The next level of questions which the instructor should ask are comprehension questions. At this level students are expected to go beyond recall by demonstrating their understanding of what the issues being raised mean. The common verbs that are used at this level include: explain, interpret, outline, express, infer, discuss, describe and summarise. Basically, the focus of the comprehension level is to test the learners' understanding. It is important to note that the cognitive level at this stage is still low. The following are examples of questions we have often asked:

- i. Describe steps you would follow if asked to evaluate a public policy of your choice.
- ii. Explain why public transport vehicles such as buses should have speed limits.
- iii. Expound how a public problem can reach the attention of public policy makers such as cabinet ministers.
- iv. Outline factors which can contribute to a public issue to reach agenda status worth the attention of policy makers.
- v. Discuss public policy making skills public managers should possess for them to effectively participate in the policy making process.
- vi. Summarise cardinal elements of modernised public policy making.

Application questions

The third level cognitive is application. Application questions expect the learners to apply the knowledge they have learned. In this regard, students are expected to execute a process or procedure in a situation with which the students are familiar. At this level again, students are also expected to solve a given problem or to develop a project or programme to solve a problem. Common verbs associated with application include demonstrate, present, change, predict, solve, use, perform and apply. Examples of such questions include:

- i. Describe how you would use agenda setting strategies to influence policy in your constituency.
- ii. Explain how your local authority can apply the rational comprehensive model in its decision making and planning.
- iii. Using examples, demonstrate how councillors can use agenda denial tactics in the policy making process.
- iv. Predict the political decisions of newly selected policy makers through the lens of public choice theory.

- v. There is rampant corruption in your local authority, and you have been engaged as a volunteer to assist it to fight the vice. Develop a plan of action to root out corruption in your local authority
- vi. Apply the rational model of policy analysis to solve a public problem in your community.

Evaluation questions

Evaluation is concerned with the ability to judge the value of a statement, research report, policy proposal or existing policy. The assessment or judgments should be based on given criteria. The criteria may be given, or the students might develop or determine their own criteria. Learning outcomes at this level are very important because they contain features of all the other categories. They also contain value judgments centred on noticeably well-defined criteria. Commonly used verbs include appraise, assess, criticise, decide, defend, determine, evaluate, justify, judge, support and weigh. The following questions are examples of evaluation questions:

- i. Debate the pros and cons of having Family and Religious Studies as a compulsory course in high schools.
- ii. Assess the efficacy of the devolution policy in your country.
- iii. Evaluate the extent to which public policies in your country are modernised and consistent with 21st century public policy expectations.
- iv. All politicians should have some basic understanding of political science and public policy analysis. Critique this statement.
- v. Compare and contrast the elite and public choice models of public policy analysis.
- vi. Assess the assertion that public policy is a reflection of selfish interests of policy makers.

Analysis questions

The fourth cognitive level according to Bloom's Taxonomy is analysis. At this level, learners are expected to identify patterns and relationships in what they have learned. Questions at this level may ask students to organise elements of a given phenomenon. They are also expected to distinguish useful from useless information. Common question verbs at this level include: analyse, examine, compare, contrast, differentiate, investigate, validate and infer. At the evaluation level, the students are expected to make judgments on the basis of given criteria or standards. Again, at this level learners are expected to critique a given statement or work. They are also expected to determine the appropriateness of a solution to a problem. Evaluation of a theory or model takes place at this level. Examples of questions at this level include:

- i. According to Thomas Dye, public policy is what government chooses to or not to do. Critique this definition.
- ii. Examine the strengths and weaknesses of the multiple streams model of policy analysis.
- iii. Compare and contrast public choice theory and the iron triangle model of public policy making.
- iv. Identify a newspaper article where a government minister is trying to justify an action or policy. Examine the discourses of motive inherent in the newspaper article.
- v. Differentiate the main attributes of an effective and ineffective public policy analyst.
- vi. Distinguish between policy analysis and policy evaluation.

Create questions

At this level students are expected to develop new ideas, new products and themes. Accordingly, learners are expected to make suggestions, propose revision to an idea, and generate a plan or proposal. They

should also be able to hypothesise and test the hypotheses. Common question stems at this level include: create, invent, compose, design, formulate and propose.

Before the revision of Bloom's original taxonomy of questions, create questions used to be called synthesis (Anderson & Krathwohl, 2001). At this level, students are expected to put together components of knowledge to create something new. Students are also expected to adopt or adapt various strategies to solve emerging problems. Development of thought-provoking ideas is also expected at this level. Students operating at this level are expected to generate new ideas and use several arguments to support those ideas. An accomplished student of policy analysis at this level should be able to propose their own policy analysis models for generating policy alternatives to solve public problems in their communities and at national level. At the creating level, learners are expected to create or develop new innovative ideas and products. Learners operating at this level should be able to carry out tasks such as the following:

- i. Develop a plan of action to get rid of a given problem such as gender violence in the community.
- ii. Recommend a policy proposal to deal with squatters at national level.
- iii. Propose a school volunteer programme to enhance the spirit of *Ubuntu*.

To assess creativity, a public policy lecturer can ask students the following questions:

- i. Your government adopts splendid isolation as its foreign policy. Imagine and explain likely consequences of such a policy.
- ii. Recommend and justify several policy alternatives to solve the problem of street kids in urban areas.
- iii. Present a policy proposal to deal with persistent hunger caused by frequent drought in your country.
- iv. Based on the theory of social construction of problems, propose and justify a public problem you would create in order to adopt your favoured policy at an opportune time.
- v. In view of several models of policy analysis you have studied, develop a synthetic model you would craft for policy analysis in your local community.
- vi. Suggest and vindicate public policies you would recommend attracting investment in your country.

IMPLICATIONS FOR PRACTICE

While the taxonomy of questions gives the impression that the questions are distinct and should operate in a hierarchical order, our view is that in practice recall questions can be embedded in other levels such as evaluation and analysis. In a typical question involving analysis, the student always starts by addressing basic recall questions before serious analysis or evaluation. Again, at the highest level of create questions, the student may start with an analysis. However, despite the overlapping and the embedded debate on the accuracy of Bloom's taxonomy, our advice to instructors is that they should vary their questions to enhance students' understanding of the subject matter. Again, at university level lower order questions are more suitable for undergraduate students while higher order questions should be predominating in graduate classes. Of course, we expect all levels of questions to be asked at all levels given the connectedness of the taxonomy of the questions.

It is important to note that Bloom's taxonomy of questions helps students to master several levels of knowledge. Instructors should therefore ensure that students master all levels of knowledge. Anderson and Krathwohl (2001) have come up with four levels of knowledge. The lower order questions at recall and comprehension levels help students to develop factual and conceptual knowledge. Factual knowledge is basic information about a specific topic or discipline that learners should understand. This basic

information includes specific terms or elements of a subject. Mastering of factual knowledge is essential for learners since it builds the foundation for them to understand cardinal facets of a given topic or discipline. Conceptual knowledge deals with understanding key terms, principles, models, concepts and theories in a given subject or discipline. Some scholars refer to conceptual knowledge as declarative knowledge. Students master this type of knowledge through listening, reading, experiencing or mental reflection. Higher order questions which focus on application, evaluation and analysis equip students with procedural knowledge which enables learners to perform specific tasks and is useful knowledge to follow specific procedures or to carry out an operation. Finally, the higher level of knowledge is called meta-cognitive which is reflective or strategic knowledge and equips learners with problem solving skills. It enhances learners' ability to design a strategy to approach a task in class or outside the classroom environment. Hence, practice questions suggested in this paper should be geared towards addressing all the knowledge levels.

SUMMARY AND CONCLUSION

Given that most universities in Zimbabwe use block release as mode of instruction, this paper contended that lecturers should give students well-planned practice questions as a strategy to enhance student learning. This suggestion is based on the theory of spaced teaching and learning which is thought to enhance student mastery of the subject matter. To be effective, the paper recommended use of Bloom's taxonomy of questions. To make the paper more practical, we used public policy analysis questions. However, the use of practice questions is applicable in all fields. The paper further recommended that instructors should allow students to ask their own questions. In the process, the instructor can moderate the class discussion through online platforms. Finally, we urge future authors to further test the applicability of our synthetic model of writing practice-based papers.

REFERENCES

- Africa Virtual University. (2020) Template for writing up your practice-based submission. <https://avu.org/avuwweb/en/resources-presenters-reviewers/template-for-writing-up-your-practice-based-submission/> (Accessed 20 October 2020).
- Anderson, L.W. & Krathwohl, D.R. (Eds.) (2001) *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York: Addison Wesley Longman.
- APA Dictionary of Psychology (2020) Massed practice. <https://dictionary.apa.org/massed-practice> (Accessed 10 June 2020).
- Benjamin, A.S. & Tullis, J. (2010) What makes distributed practice effective? *Cognitive Psychology* 61 (3) pp.228-247.
- Carpenter, S.K. & Delosh, E.L. (2006) Impoverished cue support enhances subsequent retention: Support for the elaborative retrieval explanation of the testing effect. *Memory & Cognition* 34 pp.268–276.
- Farajollahi, M. & Moenikia, M. (2010) The study of relation between students support services and distance students' academic achievement. *Procedia Social and Behavioral Sciences* 2 pp.4451-4456.
- Garrison, D.R. (1989) *Understanding distance education: A framework for the future*. London: Routledge.
- Jaakkola, E. (2020) Designing conceptual articles: four approaches. *AMS Review* 10(1) pp.18-26.

- Janiszewski, C., Noel, H. & Sawyer, A.G. (2003) A Meta-analysis of the Spacing Effect in Verbal Learning: Implications for Research on Advertising Repetition and Consumer Memory. *Journal of Consumer Research* 30(1) pp.138-149.
- Kapler, I. V., Weston, T. & Wiseheart, M. (2015) Spacing in a simulated undergraduate classroom: Long-term benefits for factual and higher-level learning. *Learning and Instruction* 36 pp.38-45.
- Kornell, N. (2009) Optimising Learning Using Flashcards: Spacing is more effective than cramming. *Applied Cognitive Psychology* pp.1297-1317.
- Moore, M.G. (1993) Theory of transactional distance. In D. Keegan (Ed.) *Theoretical Principles of Distance Education* (pp.22-38). London: Routledge.
- Pickard, M.J. (2007) The new Bloom's taxonomy: An overview for family and consumer sciences. *Journal of Family and Consumer Sciences Education* 25(1) pp.43-55.
- Rawson, K.A. & Kintsch, W. (2005) Rereading effects depend on time of test. *Journal of educational psychology* 97(1) pp.70-80.
- Rohrer, D. & Taylor, K. (2007) The shuffling of mathematics problems improves learning. *Instructional Science* 35(6) pp.481-498.
- Rumble, G. (2000) Student support in distance education in the 21st century: learning from service management. *Distance Education* 21(2) pp.216-235.
- Sewart, D. (1993) Student support system in distance education. *Open Learning* 8(3) pp.3-12.
- Shale, D. & Garrison, D.R. (1990) Introduction. In D.G.D.R. Shale (Ed.) *Education at a distance* (pp. 1-6). Malabar, FL: Robert E. Kriger.
- Simmons, A.L. (2012) Distributed practice and procedural memory consolidation in musicians' skill learning. *Journal of Research in Music Education* 59(4) pp.357-368.
- Smolen, P., Zhang, Y. & Byrne, J.H. (2016) The right time to learn: mechanisms and optimization of spaced learning. *Nature Reviews Neuroscience* 17(2) pp.77-88.
- Tabor, S.W. (2007) Narrowing the Distance: Implementing a Hybrid Learning Model. *Quarterly Review of Distance Education* 8(1) pp.48-49.
- Tofade, T., Elsner, J. & Haines, S.T. (2013) Best practice strategies for effective use of questions as a teaching tool. *American journal of pharmaceutical education* 77(7) pp.1-9.
- Vaughan, N. (2010). A blended community of inquiry approach: Linking student engagement to course redesign. *Internet and Higher Education* 13(1-2) pp.60-65.
- Voluntary Sector Review (2017) Advice for preparing Practice Papers for the Journal Voluntary. <https://policy.bristoluniversitypress.co.uk/asset/4589/what-is-a-practice-paper-sept-2017.pdf> (Accessed 20 October 2020).

Whetten, D. (1989) What constitutes a theoretical contribution? *Academy of Management Review* 14 pp.490-495.

Zigerell, J. (1984) *Distance education: An information age approach to adult education* (No. 283). ERIC Clearinghouse on Adult, Career, and Vocational Education, National Center for Research in Vocational Education: Ohio State University, US.