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Counselling for Epistemological Beliefs and Metacognitive Awareness: A Psychological Innovation for Transforming Students' Study Behaviours in Nigerian Secondary Schools

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Abstract

Nigerian students in secondary schools are said to be deficient in cognitive processes required in learning activities in order to excel in both internal and public examinations. This paper looked into a psychological innovation approach for transforming secondary school student's study behaviours by their imbibing in the culture of epistemological beliefs and metacognitive awareness through counselling. Epistemological beliefs are all about believing in oneself to make meaning out of school and understanding ones inherent ability to learn and acquire knowledge. Metacognition entails planning, monitoring and evaluating one's knowledge acquisition or learning process in order to achieve better learning outcome. Students need to be aware of these facts (metacognitive awareness) in order to be useful to themselves in the area of knowledge acquisition. This could be achieved through self-denial, habit cultivation, self-directed, problem solving, explicit instruction and mentoring strategies of counselling. Schools should be equipped with counselling facilities and trained personnel in order to transform Nigerian secondary education sector through counselling.

Keywords: Counselling, epistemological beliefs, metacognitive awareness, innovation, study behaviours.

When a child is sent to school by his/her parents or guardian, the aim is to acquire the knowledge or education necessary for his/her development and that of the larger society. The Federal Republic of Nigeria (2004) sees education as an instrument par excellence for effective national development. For this to be realized, the society, through the school presents a set of curricula activities to the child to be learnt through

purposeful guidance by his/her teachers and other stakeholders. This epistemic voyage is embarked upon and accomplished through effective teaching and learning. The processes by which teachers impart knowledge , skills and attitudes to students through a variety of procedures is simply referred to as teaching (Sheidu, 2013) while the behaviours displayed by students in acquiring or imbibing what is taught in order to effect a mental change is called learning (Ukwueze, 2011).

Effective study behaviour is described by Read, Hagen, Wicker and Alerts (1996) as active study habits that promote students' involvement and concentration in lesson in order to realize desired objectives. According to Lawal (2001), effective learning of any subject depends largely on readiness to learn, quality of learning facilities, level of intelligence, age, interest and study habits. Salami and Aremu (2006) were of the opinion that through the cultivation of good study behaviours, both failing and passing students will be able to raise their grades. On the other hand, ineffective study behaviours erode self-confidence among students and this leads to poor academic performance and cheating in examinations (Chima, 2006). Sulai (2007) blamed students' inability to perform well in both internal and external examinations like Senior School Certificate Examinations (SSCE) to negative study behaviours such as inadequate preparation for examinations, lack of correct approach to answering questions, poor interpretation of questions and giving vague answers to questions.

Poor performance of Nigerian students in West African Examinations Council's (WAEC) high school examinations dates back to post independence era. According to Kuti (1976), only 32.36% of students that sat for the examination in 1960 passed five subjects at credit level while in 1968 and 1974, it dropped to27.63% and 19.3% respectively.

Today, the story is not different. In the May/June, 2011 and 2012 West African Senior School Certificate Examinations (WASSCE),only 30.9% and 38.81% passed five subjects including English Language and Mathematics at credit level respectively(Ukwueze, 2013).Several experts have suggested several ways of ensuring a drastic reversal of the trend. These include several counselling strategies and direct government intervention through capacity building efforts. Fajonyomi (1997) suggested study skill counselling, Rational Emotive Therapy (RET) and a combined treatment of study skill counselling and RET. Aremu (1998) recommended the use of two group counselling approaches: modellingand cognitive disputing. Chima (2006) also suggested modelling through plays and rehearsals of roles to teach learning of effective study habits among secondary school students. Similarly, Kagu (2000),and Fayombo(2002) recommended group counselling, cognitive restructuring and modelling techniques of counselling to foster appropriate study behaviours among Nigerian adolescents in secondary schools. Notwithstanding the above

recommendations and interventions, performance of students in public examinations in secondary schools is still not encouraging.

There is therefore, a great need to approach the issue of poor academic performance by Nigerian students in secondary schools through philosophical and psychological interventions to assist them improve their negatively imbibed study behaviours which to a large extent, is responsible for the malaise. Awabil, Kolo, Bello and Oliagba (2013) opined that poor study behaviour is a major factor that leads to poor performance of students in examinations worldwide. It is philosophically reasoned here that what the students need are concerned with making meaning out of school, understanding one's own intentions with regard to learning and interpreting one`s learning in the content of knowledge tradition which are collectively referred to as epistemological beliefs (Porath, Lupart, Katz, Ngora, & Richardson,2009).Students also need to be aware of the concepts of self-regulating behaviours, self-motivation, self-monitoring and self-instructing skills, collectively referred to as metacognition (Rani and Govii,2013).Rani and Govii (2013) believe that students' inability to self-regulate their learning and beheviour often results to poor academic performance along with difficulties in social interaction.

The use of counselling to arouse students' interest through the concepts of epistemological beliefs and metacognitive awareness in secondary schools could be the only option that can enhance excellent academic achievement among students. A counsellor is a catalyst in a learning process whose purpose is to aid a client or student in his/her studies, bearing in mind that knowledge, skills, values and self-concepts are constantly changing (Thoroman, 1968). Hence, counselling for epistemological beliefs and metacognitive awareness is an imperative psychological innovation that can transform students' study behaviours for excellent academic achievement in secondary education.

Concept of Epistemological Beliefs

Epistemology is a philosophical phenomenon that is simply defined by Kitchener (2002) as a theory of knowledge and the process of knowing values and responsibility. Hofer (2001) perceived epistemology as a definition of knowledge, how knowledge is constructed and evaluated, where knowledge resides and how knowing as a means of acquiring knowledge occurs. In this regard, a knowledge-driven activity with a view to enhancing oneself could be an epistemic endeavour that basically forms the understanding of approaches to learning. Central to this quest for understanding in order to acquire knowledge are epistemological beliefs.

Epistemological beliefs are concerned with making meaning out of school, understanding one's own intentions with regard to learning, and interpreting one's

learning in the context of knowledge traditions (Porath et al, 2009). These experts maintained that epistemological beliefs develop from action-based understanding of the educational endeavour to the awareness of personal preferences and needs and ultimately, to sophisticated reflections on the nature of knowledge and one's role in knowledge development. There is no doubt that students and indeed, every other learner in various institutions can achieve better knowledge of academic activities if the foundations of learning through epistemological beliefs are appreciated.

Thus, understanding the epistemological underpinnings of students' approaches to learning and academic subjects can help educators to support students to consolidate their learning and move towards sophisticated constructions (Porath et al, 2009). For instance, Cano (2005) observed that epistemological beliefs influence academic achievement of students directly and indirectly via students' learning approaches. Study behaviours are therefore, very fundamental in students' learning outcomes (Kegan, 2000; Awabil, Kolo, Bello, & Oliagba, 2013; and Sulai, 2007). This synergy between epistemological beliefs and academic achievement as mediated by students' study behaviours can only be achieved to the fullest if there are mediators that explain the traditions to students. This therefore, calls for counselling interventions to enable students acquire the right knowledge for their growth and the growth of the society by simplifying complex ideas and juxtaposing a combination of simple information acquired through experience in their mind.

Concept of Metacognitive Awareness

Metacognition is a combination of two separate concepts: "meta" and "cognition in the anal of knowledge acquisition (Okoza, 2013)."Meta" stands for higher order or beyond the ordinary realm of learning while "cognition" simply means learning. Metacognition is defined by Hannah and Shore (2008) as an extra-mental power of awareness of one's capacities and abilities to monitor and regulate learning for productive thinking and qualitative knowledge outcomes. Metacognition is broadly perceived as the knowledge and control children have over their own thinking and learning activities (Cross & Paris, 1998); awareness and management of one's own thought (Kuhn & Dean,2004); and a multidimensional set of general, rather than domain- specific skills (Schraw, 1988) which are empirically distinct from general intelligence and prior knowledge during problem-solving (Okoza, 2013). In their submission, Rani and Govii (2013) stated that an individual with his/her metacognitive knowledge, undergoes metacognitive experiences to meet the demands raised by the task and applies suitable strategies for accomplishing the task to make progress towards the goals.

Metacognitive awareness is the process of knowing and teaching metacognitive activities using reflective questions. Creating metacognitive awareness

involves explicit instruction in cognitive and metacognitive strategies (Schraw, Crippen & Hartley, 2006). Hence, students can be encouraged to develop a sense of their own knowledge by asking reflective questions that can help them become more self-aware (Okoza, 2013) and make real world connections to the information they are currently learning (Peirce, 2003). According to Kramarski and Mevarech (2003), students need to be explicitly taught by teachers how to collaborate in learning. Jaja and Badey (2013) posited that the first aim of the teacher should be to help his/her students form the habit of self-control. Metacognitive awareness process involves teaching students how to be aware of how they think and how they learn in order to be more effective and more conscious of their learning approaches in order to identify the most effective skills that can improve their cognitive competence. It is a cognitive set in which negative thoughts and feelings are experienced as mental events, rather than as the self (Teasdale, More, Hayhurst, Pope, Williams & Segal, 2002).School counsellors, as major stakeholders in schools, cannot shy away from this responsibility of teaching students how to be autonomous, self-regulating and confident through self-imposed rules and regulations during learning in the classroom and in different occasions.

Counselling Strategies for Epistemological Beliefs and Metacognitive Awareness

The declining interest in reading exhibited by many students today is a great concern and challenge to the government, teachers and parents as many students nowadays record poor results in public examinations like the West African Senior School Certificate Examinations (Oso, 2012).Knowledge is all about experience. Thus, counselling should be targeted towards enabling students associate with reasonable and morally acceptable integrations and experience to acquire the right concepts of knowledge and behaviour in the society. The importance of counselling as an educational service cannot be overemphasized. The FME (2000) stated that counselling is to help students gain adequate knowledge and understanding about the skills, attitudes and values that they cultivate in order to live in a constantly changing society. There are legions of questions that need to be tackled by school counsellors in order to handle epistemological beliefs and metacognitive awareness in schools for excellent students' performance in learning outcomes. Prominent among such questions are:

i. Do students make meaning out of school?
ii. Do students understand why they are in school and the need to learn?
iii. Are students aware of their mental capabilities?
iv. Are students aware that their negative thoughts affect their studies?
v. Are students aware of the need to plan, monitor and evaluate their studies?

Therefore, counselling students to reason in order to acquire the right knowledge is a philosophical approach that should be held in a high esteem in school system. Counsellors' role in this regard is very crucial as it takes teachers a lot of time

to teach students series of activities to achieve their objectives. Sitko (1998) and Hartman (2001) buttred this assertion by stating that metacognitive instruction takes a lot of class time and that sometimes, students' progress and improvement are hardly observed. There are several counselling strategies that can be employed to answer the earlier questions so as to solve students' lingering academic problems and transform Nigerian secondary education system. These strategies include:

Self-denial strategy: This is a situation where counsellors treat students as rational beings and influence their minds instead of bodies. The approach enables students to understand that certain pleasures need to be ignored in order to achieve a particular desired goal. John Locke in Jaja and Badey (2013) asserted that children should be conditioned to submit their desires and go without their longings even from their very cradles. Through this strategy therefore, the mind of students would be trained to forego pleasures in order to be successful in their studies. The teaching here enables students to imbibe the culture of self-control which emphasizes refraining from inappropriate study behaviours that can affect their learning outcomes.

Habit cultivation strategy: Habit cultivation is a process of instilling in people, the culture of specific and guided procedure of training the mind in carrying out a behavioural disposition in a continuous and definite pattern. Counsellors can use this strategy to instill in students the appropriate culture of study behaviours like time management, textbook reading culture, concentration and coping with examination anxiety in order to excel in their cognitive exercises. Jaja and Badey (2013) cautioned that habit should be cultivated early enough into children's life when their minds are still tender and easy to be bowed. Habit cultivation is like sequential and consistent scaffolding where a counsellor breaks a complex task into smaller tasks and models the desired learning behaviour (Shukla, 2005). It involves mental attitudes and ways of behaving that contribute to success in life using critical thinking, creative thinking and self-regulated learning (metacognition). This should enable students to think and solve problems without the help of others. In addition, habit cultivation does not allow students to have what Locke in Jaja and Badey(2013) calls too easy a time as that would rob it of half its harm and more than half its values.

Self-directed strategy: Shukla (2005) stated that this strategy enables students to exercise learner autonomy where they take responsibility of their actions thereby associating their skills with effective means of learning. Here, students are counselled towards meeting personal learning objectives. Counselling is targeted towards enabling students to plan, monitor and evaluate their study behaviours on individual basis in order to do well in their studies.

Problem-solving strategy: This is a counselling strategy where possible solutions to learning problems are systematically handled and implemented through problem identification, generation of alternative solutions, choice of suitable solution among the alternatives, implementation of action plan and evaluation (Shukla, 2005) which are all elements of metacognition. Students could be given a set of academic problems and allowed on their own to tackle the problems after explaining to them the need and procedures for solving and understanding the concepts.

Explicit instruction strategy: This counselling strategy involves teaching students how to acquire knowledge through direct explanation of skills or concepts to be learnt (Shukla, 2005). According to Okoza (2013), explicit instruction provides avenue for both cognitive knowledge and cognitive regulation. This is a form of guided study behaviour strategy where assistance is given to students by teachers, peers, mates and significant others in a learning environment to enable them imbibe appropriate reading skills. It is a cognitive process that involves teaching students the right way of learning (Aremu, 1998). Students are thus, taught to imbibe proper time management and reading schedule, adequate concentration, teacher consultation, group studying, culture of reading textbooks, study procedures, allegiance to homework and assignment and adequate preparation for tests and examinations. This strategy aims at fixing in students the habit of self-discipline and self-regulatory knowledge in handling their learning activities without being pushed to do so. It is reasoned that this cognitive strategy of counselling students would arouse their epistemological beliefs and metacognitive awareness to enable them perform well in their learning outcomes at any given time. With this, students would be able to verbalize and develop a sense of reflective questioning to acquire their own knowledge and become more self-aware of their potentials, capabilities, threats and strengths. With this awareness too, students can assess themselves in terms of their study behaviours vis-à-vis their performance in classroom activities and overall learning outcomes.

Mentoring strategy: Shukla (2005) described mentoring as a process in which an experienced colleague is assigned to an inexperienced individual to assist in training or play general support role. This is where a counsellor assigns some students to more knowledgeable and experienced or senior students who act as role models to enable them help the inexperienced or at-risk students perform in their studies. According to the Federal Ministry of Education (2008), the purpose of mentoring is to improve a student's chances of achieving his/her goal by passing knowledge, experience, and guidance or psychological support to him/her by a more experienced person. Through this exercise, counsellors can extend epistemological beliefs and metacognitive awareness to both failing and passing students from brilliant students in order to improve their study behaviours. Motivation of mentee-students by counsellors for their active participation and patience during the mentoring period is a welcome strategy.

Jaja and Badey (2013) are opposed to rewards in form of material pleasures but treatment as rational creatures influenced through their minds using praise.

The list of counselling strategies that can be used to improve students' study behaviours through epistemological beliefs and metacognitive awareness is endless and depends largely on the approach that a counsellor may be familiar with and is readily available to discharge his/her duties with. Application of any of the strategies discussed above requires patience and perseverance. Secondly, no single strategy is perfectly better than another one.

Conclusions

Successful students often have greater sense of self-efficacy and attribute their success to effort and perseverance when faced with challenging academic tasks (Okoza, 2013). Nigerian students in secondary schools need extra-ordinary approach to become successful students. This is because their performance in public examinations which is an important yardstick to measure the success or otherwise of secondary education in the country has been a disappointing situation over the years. Students lack reading culture as most of them register for and sit for public examinations without adequate preparation. It is as if several of them are not aware of the reason why they are in schools or they do not know what they are capable of doing with their brain. Several of them spend more time on social network via face book, twitter, skype and a host of others using cellular phones and cyber cafes than on their studies.

This calls for counselling interventions in order to work on the mindsets of Nigerian students. With this in place, the country's secondary education could be transformed. Thus, one of the innovations for transforming this sector of education is to modify students' study behaviours through epistemological beliefs and metacognitive awareness. Counselling strategies capable of achieving this include self-denial, habit cultivation, self-direction, problem-solving, explicit instruction and mentoring whose applications need patience and perseverance in order to meet the set counseling objectives of improving students' study behaviours to improve their learning outcomes and overall secondary education in Nigeria.

Recommendations

Based on the philosophy of this paper and the need to transform secondary education in Nigeria through the application of counselling in effecting changes on students' inappropriate study behaviours using some strategies to strategize epistemological beliefs and metacognitive awareness among students, it is recommended that:

i. every secondary school in Nigeria, either public or private should implement the establishment of guidance and counselling as a matter of urgent national policy.
ii. all existing counselling offices in schools (where they exist) should be equipped with trained professional and working materials like standardized psychological tests for effective counselling of students.
iii. Counsellors should use eclectic approach in selecting their strategies, hence, a combination of two or more strategies in counselling students on epistemological beliefs and metacognitive awareness is required as a strategy that works for a particular student or a group of students may not satisfactorily work for others due to individual differences.
iv. Counsellor education curriculum should be reviewed to reflect the tenets of epistemological beliefs and metacognitive awareness in counselling for the benefit of counsellor trainees and practicing counsellors.
v. Counsellors should be sponsored to conferences, seminars, and workshops where they can be exposed to contemporary strategies of counselling for epistemological beliefs and metacognitive awareness to improve students' study behaviours as a way of transforming secondary education in Nigeria.

References

Aremu, D. O, (1998). The effect of two group counseling approaches on the self-concept of selected JSS 3 students. *The Nigerian Journal of Guidance and Counselling,* 6(1&2), 1-10.

Awabil, G., Kolo, F. D., Bello, R. M. & Oliagba, D. A. (2013). Effects of study and self-reward skills counselling on study behaviour of university students in Ghana. *The Counsellor*, 32, (1 & 2), 39-46.

Cano, F. (2005). Epistemological beliefs and approaches to learning: Their change through secondary school and their influence on academic performance. *British Journal of Educational Psychology,* 75(2), 203-221.

Chima I. M. (2006).Self-confidence training and effective study habits as veritable strategies for curbing examination malpractices among secondary school students. *The Nigerian Educational Psychologist,* 4(2), 314-327.

Cross, D. A. & Paris, S. G. (1988). Developmental instructional analyses of children's metacognition and reading comprehension. *Journal of Educational Psychology,* 80(2), 131-142.

Fajonyomi, M. G. (1997). Effectiveness of three models of treatment on anxiety and performance in English Language among co-educational secondary school students in Maiduguri, Borno State. *Unpublished Ph. D Thesis, University of Maiduguri, Nigeria.*

Fayombo, G. A. (2002). Fostering discipline among Nigerian adolescents through Cognitive restructuring technique. *Paper presented during the 26th Annual national conference of the Counselling Association of Nigeria (CASSON), Benin City. August 19-23.*

Federal Ministry of Education (2000).*Blueprint on Guidance and Counselling in Nigerian Educational Institutions.* Abuja: Arts and Culture Education Branch.

Federal Ministry of Education (2008). *A hand-book for 2008 MDG Stumec programme.* Abuja: Special Education Division.

Federal Republic of Nigeria (2004).*National Policy on Education*. Lagos: NERDC Press.

Hannah, C. L. & Shore, B. M. (2008).Twice exceptional students' use of metacognitive skills on a comprehension monitoring task.*Gifted Child Quarterly*, 52 (1), 3-18.

Hartman, H. J. (2000). Developing students' metacognitive knowledge and skills. In H. J. Hartman (Ed). *Metacognition in learning and instruction: Theory, research and practice*. Boston: Kluwer Academic. 33-68.

Hofer, B. (2001). Personal epistemology research: Implications for learning and instruction. *Educational Psychology Review*, 13 (4), 353-382.

Jaja, J. M. & Badey, P. B. (2013).John Locke's Epistemology and Teachings. *African Research Review*, 7(1), 1-13.

Kagu, B. (2000). Effect of group counselling on study habit patterns of adult learners. *The Counsellor*, 18 (1), 148-155.

Kegan, R. (2000). What "form" transforms? A constructive-developmental approach to transformative learning. In J. Mezirow (Ed.) & Associates, *Learning as Transformation* San Francisco: Jossey-Bass.3-34.

Kitchener, K. S. (2002). Folk epistemology: An Introduction. *New Ideas in Psychology*, 20, 89-105.

Kramarski, B. & Mevareach, Z. R. (2003).Enhancing mathematical reasoning in the classroom: The effects of cooperative learning and metacognitive training. *American Educational Research Journal***,** 40 (1), 281-310.

Kuhn, D. & Dean, D. (2004). A bridge between cognitive psychology and educational practice. *Theory into Practice*, 43(4), 268-273.

Kuti, M. A. O. (1976). The need for counselling in Nigerian secondary schools. *Journal of Science Teachers' Association of Nigeria*, 15(1), 20-27.

Lawal, M. B. (2001). Learning outcomes and cognitive preference styles of junior secondary school social studies students exposed to concept mapping and value classification strategies. *Teacher Education Today*, 1 (1), 104-118.

Okoza, J. (2013). Understanding metacognitive awareness among teachers in the school system: Issues and benefits. *Journal of Educational Studies and Management*, 1 (1), 137-150.

Oso, S. O. (2012). An assessment of reading culture among Nigerian secondary school students in Ekiti State, Nigeria. *Journal of Applied Education and Vocational Research*, 10(1), 19-31.

Peirce, W. (2003). Metacognition: Study strategies, monitoring and motivation. Retrieved on June 10, 2014 from http://academicpg.cc.md.us/wpeirce/ MCCCFR/ metacognition.htm

Porath, M., Lupart, J., Katz, J. Ngara, C. & Richardson, P. (2009).Gifted learners' epistemological beliefs. *Talent Development and Excellence*, 1(1), 57-66.

Rani, R. & Govii, P. (2013). Metacognition and its correlates: A study. *International Journal of Advancement in Education and Social Sciences*, 1 (1), 20-25.

Read, J. I., Hagen, A. S., Wicker, F. W. & Allert, D. C. (1996). Involvement as a temporal dynamic effective factor in studying for examinations. *Journal of Educational Psychology*, 8(1), 130-137.

Rubin, D. (2002). *Diagnosis and correction in reading and guided reading instruction*. Boston: Allyn and Bacon.

Schraw, G. (1998). Promoting general metacognitve knowledge awareness. *Instructional Science*, 26(1&2), 113-125.

Schraw, G., Crippen, K. J. & Hartley, K. (2006).Promoting self-regulation in science education. *Education*, 36, 111-139.

Sheidu, H. (2013). Enhancing the quality of teacher education for national development. *Journal of Teacher Perspective*, 7 (4), 859-866.

Sitko, B. M. (1998). Knowing how to write: Metacognition and Instruction. In T.D. Hacker, J. Duntosky & A. C. Graesser (Eds). *Metacognition in educational theory and practice*. New Jersey: Lawrence Erlbaum, 93-371.

Shukla, R. (2005). *Dictionary of Education.* New Delhi: A.P.H. Publishing Corporation.

Sulai, M. E. (2007). Strategies for improving students' performance in SSCE in Biology in Gombe State. *Journal of Nigerian Association of Teachers of Technology (NATT).* 6(2), 46-50.

Teasdale, J. D., Moore, R.G., Hayhurst, H., Pope, M., Williams. S & Segal, Z. V. (2002). Metacognitive awareness and prevention of lapses in depression: Empirical evidence. *Journal of Consult Clinical Psychology*, 70(2), 275-287.

Thoroman, E. C. (1968). *The vocational counselling of adults and young adults.* Boston: Houghton Mifflin Company.

Ukwueze A.C. (2011). *Learning Strategies and Career Information*. Enugu: Iyke Ventures Production.

Ukwueze, A. C. (2013). Gender and career aspirations as indices of students' academic performance: Career counselling implications. *Journal of Educational Studies and Management*, 1(1), 2209-220.