

A CRITICAL ANALYSIS OF FIJIS KNOWLEDGE BASED SOCIETY: THE EDUCATIONAL IMPACT

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INTRODUCTION

The creation of the knowledge base society in Fiji is easier said than done as we hurdle into the 21st century. It raises three interesting and important issues for teachers. Firstly, relooking at early Fijian education and understanding how the centre-periphery that is inclusive of power-coercive; enforcing compliance by those with less power, rational-empirical; the top down approach, normative re- educative model; assumes how culture can be shifted into a productive form, contributes and continues to impact Fiji curriculum. The gist for learners to date comes in the form of rote learning and the examination routine which leaves very little or no room for critical analysis and critical thinking processes. In regards to teachers the hands off approach to curriculum development. Secondly, the impact of rote learning on Fijian education and climate change. Lastly, highlighting the way forward on how meaningful learning that involves the creation of critical thinking process in lifelong learners will offer assistance in the resistance against climate change.

Early Fijian Education

Traditional education long existed in Fiji before the arrival of the missionaries. This mode of education focused on community maintenance and continuity. Due to the community involvement traditional education had a great influence on what was being taught and learned. Learning was practical and pragmatic and the outcomes was easily identified in terms of values and behavior for community survival, acquisition of food and other necessary materials and controls for the family and the demonstration of acceptable attitudes prior to the introduction of education from the early Christian missionaries. The early Christian missionaries first introduced formal education with Christian principles in the early 19th century. In the midst of its introduction other forces in term of racial biasness towards other ethnicities in relation to education and other related aspects of life were at work that shaped the way formal education progressed in Fiji.

“Two factors particularly influenced educational development were firstly the lack of government involvement in the establishment of schools in the early years of colonial rule, thereby forcefully initiating community based initiatives; and secondly the policy segregation and differential treatment in education pursued by the colonial government until the early 1960’s” (Naidu, 1997) .

The extreme purpose was the transformation of the iTaukei society with a British based curriculum that focused on the products of learning rather than the process of education. This was the beginning of formal education in Fiji with the introduction of an imposed curriculum that would later be influenced by Australia and New Zealand pedagogy and assessments techniques.

However despite the British government towering presence it had minimal involvement in the educational field. The colonial government focused on the development of the colonial administration which the early government schools primary goal was producing functionaries of the colonial government that introduced the imposed curriculum.

The imposed curriculum in due course impacted schooling and the “*centre-periphery model*” of curriculum development put the decisive power in the hands of those that developed it without considering the promotion of culture and learning pedagogy of the wider community.

Centre-periphery model

The centre-periphery model is one of the three typical approaches used in educational innovations according to Chin and Benne (1969) cited by Nickols and Forbes (2001) that included Power-coercive, rational empirical, and normative re-educative,

Power-coercive: In such cases changes is accomplished through application of power, with those holding greater power enforcing compliance by those with less power. The so-called Centre-Periphery model is a good representation of power –coercive approach because it represents a top-down movement of innovation. According to Whitehead (1980).

“it involves a passive diffusion of a centrally prepared innovation deemed necessary to the recipients”. Typically the needs of the recipients are not taken into consideration when the innovation is developed. The curriculum innovations in Lesotho seem to follow the centre-periphery model. An already-prepared curriculum, developed by government educational sectors such as the National curriculum development centre in the form of a syllabus document, was given to teachers to implement”.

Rational-empirical

This model assumes that all teachers are rational people expected to adopt the proposed change (Nickolas, Fobes, 2001). It emphasizes the top down approach dominant in the European and America in the 1960 which emphasize s the change process as a continuum of activities from research to practice. The receiver of this approach is mostly passive and this has been proven to be an ineffective in initiating and sustaining change.

Normative re-educative

The assumption for this mode of curriculum development is the re-education of teachers from the status quo to the new way of teaching acknowledging that peoples behavior is influenced by their socio- cultural values and that through direct interventions by innovative mean people can change the values, skills and attitudes.

Examination in Fiji in the last decades

Examinations have been a part of Fiji probably since the arrival of the missionaries which was later influenced by Australia and New Zealand to date. Examinations have had a massive influence on how teachers teach, how students learn and what they learn and viewed as the final custodian of accomplishment standards. Over decades several had been introduced and removed.

The previous Minister of Education Filipe Bole highlighted the reason why the removal of examination was significant at that point in time *“these examinations had served their purposes and had to be abolished”*.

In 2010 the Fijian Government decided to adopt an examination free system whereby in 2011 Cabinet decided to phase out the other internal examinations and not replace them. This was initiated in light of the high dropout rates in Fijian schools. The decision saw to the phasing out of Fiji Intermediate Exams [FIE] in 2010 while Fiji Eighth Year Exam [FEYE] and Fiji Junior Examination Certificate [FJEC] were phased out on 2011. Only the FSLC and FSFE will remain in the system. The Ministry of Education was convinced the removal of examinations from the education system would relive teachers from excessive examination pressure when fighting for time to cover the syllabus. The 1969 Commission highlighted

“how examinations involving the rote learning culture inhibited attempts to liberalize the curriculum and pedagogy. Despite the curriculum being locally initiated it is still removed from real life. It is overloaded with factual content, rigidly shoved to nationwide a school which is the main focus for teachers to deliver”.

Rather than develop theoretical understanding which includes meaningful learning is critical for teaching strategies to empower students to think outside the box. Learners are expected to

accurately regurgitate what they have been taught using the pen and paper tests and examinations to date is still considered to be an educational achievement in Fiji regardless of students holistic ability.

However this is not only the existing challenges that students and teachers encounter on a daily basis. Several issues listed below highlight the challenges inclusive in curriculum development, pedagogy and assessment prevalent in Fijian Education;

- There is a top-down approach to curriculum development and implementation which prevents teacher led innovation teacher-led innovation;
- There is a deeply entrenched certification/examination mentality;
- Teachers' pedagogical intentions are not reflected in their practice;
- Too many teachers feel pressured to deliver the content of the curriculum on time, and therefore resort to lecture style lessons;
- Despite Fiji's cultural diversity, many teachers do not recognize the importance of cultural responsiveness or contexts as important to pedagogical success;
- Teachers rarely talk about professional development or pedagogical practice at school;
- Teachers are overly mindful that their performance assessment is based on student scores and percentage pass rates. They're therefore reluctant to facilitate more innovative learner-centered pedagogies. These issues highlights the impact rote learning has had on student achievement.

Rote learning

Rote learning is a memorization technique based on repetition. The idea is that one will be able to quickly recall the meaning of the material the more one repeats it. Learners commit things to memory so methodically that they can recall facts, immediately when given the right cue, whether or not they can apply, extend or process them e.g. Jack in class reads a book chapter on assembling the parts of a lawn mower; he reads it carefully making certain he reads all the words and intently studies all the diagrams that come in four parts. When he is asked in class to recall all the components of the material he remembers almost all of the important definitions, terms and facts of the reading article. When he is asked to use the information to solve problems he cannot. Jack processes relevant knowledge but is unable to use that knowledge to solve problems. He cannot transfer this knowledge to a certain situation. Jack has concentrated on relevant information but has not understood it and therefore cannot use it. This is called rote learning. Rote learning like memorization is a frontage road. It runs parallel to the best parts of learning, never intersecting. It's a detour around all the action, a way of knowing without learning, of answering without understanding.

Rote Learning Impact in Fijian Education

Much of Fiji education current curriculum is formal, didactic, teacher-centered, examination oriented and directed towards memorizing and regurgitating knowledge. The shift in learning from student centered to teachers centered learning emphasis in the last several years is evident in the emphasis on passing external examinations, which results in massive quantity of rote learning and a limiting pedagogy,

“examination system may encourage rote learning to the detriment of understanding of subject material and the development of intellectual skills for processing manipulating that material” (Education, 2000).

Students educated in this paradigm score high marks in examinations, but lack the ability to show initiative, think creatively, laterally and are poorly prepared for higher education as commended by tertiary providers. Rote learning initiates students with low cognitive abilities to fend for themselves in this rushing process, as teachers speed up the coverage of lessons. The possibility of children learning for themselves is very limited unless encouraged to look beyond the known, which has quite adversely affected the ability of Fijian students to learn for themselves. They rely on the teacher for assistance in activities, instruction and discipline (Nathan, 2005)

“when educators fail to engage students in meaningful relations and instead impart core ideas as isolated facts or abstract concepts these facts and concepts are no longer connected to the situation that allow them to be powerful tools in the world. The core disciplinary formalises (facts, concepts, practises, methods, principles) run the likely risks of becoming disembodied and effectively disconnected from and meaningful use in the world”

Gwang-Jo Kim, the Director of UNESCO’s regional headquarters in Bangkok, defined this way of learning in which a majority of the world’s people have been educated over the past century as rote learning. The impact of rote learning is a massive factor in regards to the quality of primary and secondary education in Fiji. Learners are in no position to become creative as rote learning impedes this process. The concepts learnt during rote learning does not reflect the needs required of students in the 21st century work market, and to some extent does not engage learners to link learning and contemporary situations on a daily basis. (Whitehead, 1929)

“it is one thing to “know” something in order to pass a standardised test and quite another to function in those situations in which knowledge has value and skill , another to choose to engage in these situations”

The challenge for teachers in Fiji is to research, discover and share with learners how to utilise the internet to enhance learning and not impede the learning process. The article discussed in (Bolatagici, 2016) *“New tech downgrades reading, affects critical thinking”* discusses the comments by the Director of Research Office at the University of the South Pacific Dr Jito Vanualailai highlighting how the excessive use of new technology impacts learning and that reading was no longer deemed critical for children development. Learners and adults are caught up in games and the latest online applications that has taken over the ability to think creatively and use vocabulary in an orderly fashion.

“People are more interested in social media, the internet; text there is not reflective reading. They use words that cannot be read by our generation through visual media. As a result of which our critical thinking skills have declined,” Dr Vanualailai

The article also argues how reading for pleasure that encouraged creative thinking and engages imaginative thought was declining. The assumption here is that the internet is detrimental for our learner’s growth and social development. However consideration should also be taken in regards to our teachers. Are all Fijian teachers computer literate to utilise the search engines and locate educational ideas and concept to enhance learning? Have teachers been encouraged to assist our learners with providing them appropriate free reading websites in schools for those that are accessible to internet coverage. The Fiji National University's Dean of the College of Humanities and Education Dr Eci Nabalarua shared in her presentation that; *“teachers had indicated to her that most of their students, especially in island schools, do not know how to read or write in English”*, further backed up by a principal of an urban Viti Levu school *“they had to have extra reading classes for Year 9 students simply because they did not know how to read”*.

However what the article fails to state reading has been an ongoing issue and with the introduction of social media will only turn for the worse. It does also not mention these children with reading difficulties have libraries with improper reading facilities, without fully trained remedial teachers? How many of these children were dyslexic and those that had visual and auditory challenges? How many of these children had no consistent supply of electricity at home to assist reading in the dark? How many were able to fluently read in their mother tongue yet have found reading in English challenging? How many were orphans, from extended and nuclear families? The emphasis should have been the holistic development of the child and not an aspect only. To realize that literacy is a much larger process and not only what occurs in the “black box” but entails frequent guided manner to use the concept in a very meaningful way before reading is to be mastered. Children from the islands and highlands find reading challenging due to the language barriers. Some children the maternal and paternal mother tongue differ, with the written

iTaukei (Bauan) version totally foreign to the one used by the child at home. With English being added into the equation creates more confusion to the child than good (Coxon, 2000)

“in order to develop literacy during the primary school years, it is essential that student’s get sound, systematic and regular opportunities to use and experience oral, written and visual language. This includes reading, writing, speaking, listening and viewing. All language learning should be student centred. It should arise from the needs and interest of the students and it should be placed within meaningful situations to which the student can relate. This should happen within a thematic approach that integrates the whole teaching and learning programme”.

The National Curriculum Framework seems to contradict itself when it highlights; *“emphasizes the importance of culturally and socially responsive classrooms for cognitive and non-cognitive development”* If the focus were to be on cognitive and non-cognitive development how many children in Fiji know how to swim, meke and fish in the traditional sense not recorded? Despite Fiji being a republic will we continue to be shackled by the language and attitudes of the colonizes.

A lot of emphasis is placed on the 21st century learner in Fiji and not the teacher as it is the teachers task to assist learners in reading, however whilst most do others blame their predecessors for this shortfall. How many teachers before beginning the first English lesson of the year when in the maritime, highlands or rural localities thoroughly explain the significance of the English lesson to the class? How to teachers cultivate 21st century learners when they themselves lack the appropriate skills to impart? It would be assumed teachers are reading to students in class not for exercise but for pleasure. Teachers should be sharing their experiences with their children and vice versa on the topics they may have read online or in a book so learners will be encouraged to share their experiences. Read-a-thon either online or in the classrooms should be encouraged to empower learners to cultivate reading as it will also assist learners connect with other contemporary issues.

Despite the demand in quality of teaching and learning process needs to be immediately relooked due globalization and climate change threat. Currently some teachers have recognised the need to include learners and technology for effective quality learning to be a part of school daily routine. This idea is not was not evident before when rote learning is emphasized.

Rote Learning Impact on Climate Change

Rote learning continues to have an impact on learners and to some extent present a worrisome picture of threats if it is not removed from our classrooms. The removal of the rote learning

method should be introduced gradually for in certain quantities it is also useful as previously mentioned. The school science programs that are currently in place needs to be more inclusive and introduce students to more scientific and technological concepts and skills, exploring the connection between the environment and humanity to assist in the battle against climate change.

Primary schools can play a significant role in ensuring that indigenous skill and knowledge about the natural environment is not lost. If the Pacific Island Forum is focused on achieving universal and equitable education participation and achievement, and to improve the quality of educational outcomes than the current science programs must be linked with music, and contemporary art. This will enlighten children about their role and the roles of the indigenous people of the sustainable use of natural resources and become protectors of the local biodiversity as the threat of climate change increases.

Secondary school students who study physics which focus mainly on chemicals and physical processes that are described as taking place need to integrated these lessons with other subjects so that concepts are not taught in isolation. Currently there is little or relatively no connections what occurs in packaging, managing and quality testing, food processing, and agriculture. (Barab, 2006)

“more problematic, however is that learning schools all over often focuses on the content to be learned, not on the adoption of an intention that, in order to satisfy, requires the use of the content. In the most problematic manner, schools have often put the metaphorical cart (the content) before the horse (those situations and reasons in which the content has value)

However, the evolving nature of our lives and economies demands more responsive, locally and contextually relevant, and future focused curricula that prepare today’s learners both cognitively and non-cognitively for the diversity of challenges that the 21st century presents. Climate change is not only taking place but quite literally taking places” imposing more frequent and intense extreme events such as floods, hurricanes, droughts and heat waves built on environments where people are not prepared to deal with the changing conditions on a daily basis. It is therefore critical that the current curriculum process, integration and delivery is tailor made to suit climate change as it will become a huge factor in determining the process of our economy and the way we live and be in the future.

Knowledge Based Society appearance into Fiji documents

In September 2008 Fijis interim Government launched the national initiative to build a better Fiji for all through a Peoples Charter for Change Peace and Progress. The first step was the preparation of a report with a list of recommendations for changes to the current system of

government, the constitution, laws, resources development, economics, institutional reforms, community relations and leadership values. The second phase was to provide a draft peoples charter. Within the charters eleven pillars inclusive in pillar nine making Fiji a knowledge based society that has resulted from the critical problems and issues highlighted in (Fiji Government, 2008).

The University of Vice Chancellor in delivering his speech at the April 2016 graduation highlighted the need for grandaunts to

“embrace and apply the technical knowledge and skills you have assimilated from the university’s evolving interdisciplinary programs; knowledge and skills that will ensure your place in Fiji’s history through enabling you to make a contribution to Fijis embryonic knowledge society.....so the university must now begin to see knowledge-based development today as the primary engine of social and economic growth in relation to Fijis national development”

The need to develop the knowledge based society is crucial if Fiji is to have a seat in it. He further highlights the need to have progressive value of truthfulness and respect for each other. In this regard it is of great significance as respect will immanently create programs of meaningful learning in all subjects to translate into caring for the environment.

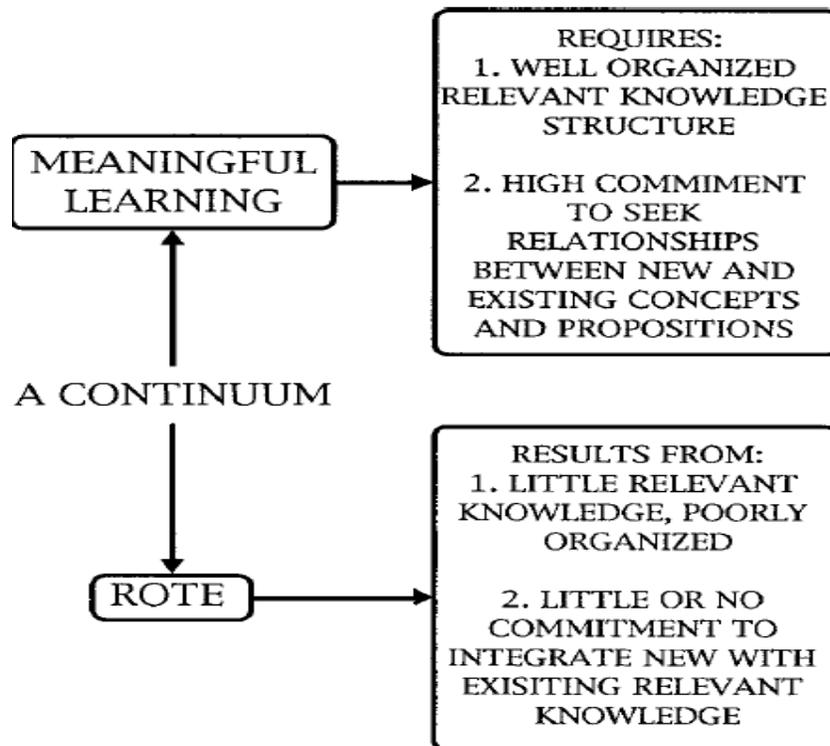
Meaningful learning

Meaningful learning is the ability to relate what is learnt to enable students to successfully solve problems. This learning method is a process that views the scenarios from which the problem is presented to that on building mental pictures. Upon the construction of the mental presentation student must seek alternative ways on solving the problem. (Mayer, 1992)

"Meaningful learning occurs when students build the knowledge and cognitive processes needed for successful problem solving. Problem solving involves devising a way of achieving a goal that one has never previously achieved; that is figuring out how to change the situation from its given state into a goal state. Two major components in problem solving are (a) problem presentation of the problem, and (b) problem solution, in which a student devises and carries out a plan for solving the problem"

An example; Paul reads the same textbook and chapter as Jack in class on assembling the parts of a lawn mower; he reads it carefully trying to make sense out of it. When asked to recall the material, he like Jack remembers all the important terms and facts of the chapter. In addition when he is asked to use the information to solve problems, he develops many potential solutions. In this scenario, Paul not only has Paul acquired relevant knowledge, he also can use that

knowledge to solve problems and understand new concepts. He has the ability to transmit new knowledge to advanced learning situations. Paul has attended to relevant information and has understood it. The resulting learning outcome can be called meaningful learning. The diagram below depicts the process of rote and meaningful learning well



The Next Step

Learning engages the attainment of knowledge. The view of learning has implications for how we teach our children such as presenting information to learners in books and lectures and how to test to find out how the presented material had been remembered. In regards to the knowledge acquisition of learning teachers sometime over emphasize one kind of cognitive processing in instruction and assessment that focuses on rote learning. The phenomena of creating the Fijian knowledge based society has gripped Fiji all so suddenly and how does one go about its process without throwing the baby out with the bath water. The Knowledge Based Society (KBS) is a one that seeks to empower individuals to become lifelong creative learners. These individuals have the ability to think outside the box and create ideas, products and businesses while at the same time adding and modifying their creation to be contemporary for the market demand. The creative ability of utilizing knowledge is one of the factors that drive competition in the market place.

“The Knowledge Based Society is the society which is characterized by the values of predominance of creativity and creative activity as well as values which express the generation, spread and use of new knowledge. The underlying interests express the objectives to create, spread and use new products of art, technical, business and other creation, as well as initiate, generate and implement multiple creative ideas and innovations in all areas of life” (Melnikas, 2011)

“Knowledge society generally refers to a society where knowledge is the primary production resource instead of capital and labour. It may also refer to the use a certain society gives to information” (Evers, 2003).

It is worthy of mentioning here that it is subtly different from *Knowledge Economy (KE)*. The KE is one in which growth is dependent on the quantity, quality, and accessibility of the information available, rather than on the means of production of information. In the KBS critical thinking is very essential for its advancement and the need to relook at the need for this skill in learners and individuals is critical.

Everyone thinks as it is our nature to do so. However much of our individual thinking if left to itself, is predisposed, cynical, impartial and times packed with prejudice. This way of thought is costly both in terms of money and the quality of life we live or desire to do so in the future. Therefore the need to nurture excellence in thought must be methodically cultivated.

Critical thinking is the process of analyzing and evaluating thinking with a view to improving the current situation one is to be in. In a *“nutshell it is self-directed, self disciplined, self monitored and self corrective thinking. The result of being a critical thinker is enormous compared to if one continues to being a rote learner. Well refined critical thinkers will possess the following attributes”*; (Paul R & Elder L, 2006)

- *Raises vital questions and problems, formulating them clearly and precisely;*
- *Gathers and assesses relevant information, using abstract ideas to interpret it effectively;*
- *Comes to well reasoned conclusions and solutions, testing them against relevant criteria and standards;*
- *Thinks open mindedly within alternative systems of thought, recognizing and assessing, as need be, their assumptions, implications and practical consequences and*
- *Communicates effectively with others in figuring out solutions to complex problems.*

Not all rote learning methods are detrimental to student learning. For instance rote learning comes in handy when remembering birth dates, pin numbers and passwords, the old and new

capital of Fiji to name a few. However if education is to contribute to the nations development the Fijian government must turn its attention more directly to the quality and relevance of education that it is providing to the students throughout the country.

The need for teachers to be part or take part in curriculum development is crucial now than ever before. Teachers will assist curriculum designers or design their own contemporary curriculum to support the accusation of some formal content. At the same time establish a context that has the possibility to connect the learner into a larger network of possibilities. This linked with engaging the learners to the situation that his or her life world is increased to include more sophisticated networks, thereby supporting richer potential for more expansive efficiency processes that build on to critical thinking. The improvements in sufficient teaching resources and teaching quality nationwide together with the new vision of creating critical thinking learners that will encounter the changed pedagogy for learning and teaching.

This will be offered by teachers to learners if Fiji is to create the Knowledge based society. The reality of the top-down approach to curriculum development and implementation which prevents teacher-led innovation will be a concept of the past. As (Education, 2000) highlights;

“One of the important skills students need to acquire is that of comparative and critical analysis...the development of critical analytic skill is vital for the processing of the vast amounts of material that characterize the world today. The curriculum will need to be revised so that students spend more time in developing these skills and less time acquiring factual information some of which is dubious value and applicability”

What’s needed are curricula and pedagogies that develop learners who are critical thinkers, innovative and entrepreneurial, compassionate citizens, adaptive to change, and collaborative. They state that the 21st century approaches that lead to the development of these competencies and dispositions place learners squarely at the centre of the learning process (Bard, 2002)

“(a) knowing is an activity- not a thing; (b) knowing is always contextualized- not abstract; (c) knowing is reciprocally constructed in the individual environment interaction- not objectively defined or subjectively created; and (d) knowing is a functional stance on the interaction- not a truth”

In this sense, learners are seen as producers of knowledge, reflecting the fact that knowledge is not something static or fixed, or something to be transmitted from one person to another. Instead, knowledge is now understood as the accumulation of reflective experiences that take place through a learner’s interactions with the real world around them.

If meaningful learning is to take place successfully in Fiji to some extent rote learning will be needed but learners should be empowered to realize that due to contemporary climate change issues facing the world a large portion of rote learning needs to be removed from the curriculum. It was viable to an era that did not have climate change issues whereby the awareness of consumer demand and economic growth were not fully acknowledged as factors that drove climate change.

Fijian children in the Knowledge Based Society will need be critical meaningful learners understanding consumer demand and economic growth are motors of environmental destruction. These learners will possess the ability to creatively think of alternative ideas and designs for the products and patents friendly to the environment to assist and be ahead in the fight against climate change. *The Pacific Education and Development Framework (2009-2015)*

“seeks to enable each Pacific learner to develop all his/her talents and creativities to their fullest potential. Thereby enabling each person to take responsibility for his or her own life and make a meaningful contribution to the social, cultural and economic development of Pacific Society”.

This process will most probably encourage teachers to build the desire to be innovative in their pedagogical practice and focus on non-cognitive skills in the classroom as they realize all learners whatsoever upbringing they come from come to school with significant knowledge. These may have been taught to children from adults or learnt through experience provided by the environment as concede by (Coxon, 2000)

“Whatever their background, all children arrive at school with important knowledge, skills and attitudes. They have mastered speaking and listening in their mother-tongue, they have learned basic facts about quantity, they have learned about social expectations and they have already developed many understanding about the world around them. The concepts underpinning all this knowledge have not been given to the children by the environment; they have been constructed by the children themselves through their interactions with the environment. These early accomplishments demonstrate that, by the time they start school; all children have already done some serious work. The primary school must build on that prior learning and offer a teaching and learning environment that both complements children experiences outside school and encourages them to interact in ways that lead to further knowledge construction”

Fijian learners in the Knowledge Based Society in short will become self-directed, self-disciplined, self-monitored and possess self-corrective thinking and actions to the designs they make. This will require rigorous moral standards on how to care for the environment. They will also entail effective communication and problem solving abilities and the ethical commitment to overcome issues no matter the cost if the environment to be in danger.

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