The Potential Impact of Value Chains to Physical Education as a Curriculum Subject

By

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Research Article

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ABSTRACT

This paper focuses on Physical Education (PE) as a curriculum subject which is struggling in the education system from the local to the international level. The paper relied on document analysis, unstructured interviews and observations. It will give an understanding of value chain as it has developed since Porter (1985) popularized it. The paper attempts to transform the treatment of the subject in the school system and in general by creating and taking advantage of value chains. It will identify and analyse both the primary and support activities that can form the value chains in the subject. The paper examines success theories of value chains in business and suggests that PE should be treated like a business since it culminates into sport which is itself a business. The paper will show that even though it is not treated like a business in the education system, PE encounters competitive forces such as those experienced in business. The paper will also show how each independent partner can be known to every other partner, all of whom should acknowledge that they are connected to the demand side of the market. It will show the importance of specialization to eradicate assumptions that PE can be anybody’s job.

Keywords: Physical Education, value chain.

INTRODUCTION

Porter used the concept of value chain to describe value creating processes within and between collaborating firms towards customer requirements. Value chain describes the full range of activities that are required to bring a product from its conception to its end user and beyond (Hamacher, 2011). The term value chain is used to describe the linkage between multiple firms to produce benefits to customers. Value chains are strategic alliances of partners who work together to provide specific products, services and values to meet market demand (Sturgeon, 2000). Sturgeon says that value chain can be referred to as commodity chain, value network, activities chain, production network or input-output analysis. The chain starts from right at the bottom and it goes up the rungs methodically, step by step. At every step there is useful and unavoidable input. Without any particular step, the chain may not function efficiently. According to Sturgeon, (2000), monitors and evaluators are part of the chain and are important at every stage. (Sturgeon, 2000) gives the following example: that research is used by a company that supplies tomato seeds to a grower who grows tomatoes and sells them to a processor, who takes out the seeds and the skins, etc. and sells the result to a soup manufacturer who adds ingredients and buys supplies like cans and labels and puts the can of soup together. The manufacturer is inspected by food safety authorities and supported by a bank. The manufacturer sells the soup to a distributor who sells the soup to a grocery store. You buy it and take it home. Once you use it you throw the label away and recycle the can.

Education can be a good example of a service chain. For instance, schools hire teachers, purchase supplies, use utilities and provide experiences for students in education. Students are expected to internalize the knowledge and skills they need to become gainfully employed and to be effective in life. Lynch (2006) says that value chain identifies where the value is added in an organization and links the process with the main functional parts of the organization. Pitta and Laric (2004) cited by Hansen (2007) say that the definition of ‘value’ depends on the communication between the service provider and the customer; the latter of whom is translated in this paper to mean both the authorities in education and the child being taught Physical Education (PE) or the parent whose child is being taught PE.

The concept of value chain is based on the premise that every company is a collection of activities that are performed to design, produce, market, deliver and support its product. Anandarajan, Anandarajan and Wen (1998) say that the relevant value activities are defined as the physically and technologically distinct activities that a firm performs to achieve its objectives. According to Machail (2011), Hitt et al (2007) believe that the value chain shows how a product moves from a raw material state to an output that will be delivered to the final customer. Thus, the essential idea of the value chain is to create additional value without incurring significant costs while doing so and to capture the value that has been created.
Physical Education, a Curriculum Subject Struggling in the Education System

Some subjects seem to already benefit from the value chain in education with many stakeholders being actively involved from the drafting of the curriculum to readily absorbing the product in employment. For instance, according to Dr. Sibanda, current president of the Public Accountant and Auditors Board (PAAB) in Zimbabwe, the industry has a lot of input in the university curriculum. The universities liaise with the Ministry of Education in setting up the secondary school “O” and “A” level syllabi. “A” level graduates can be absorbed in the accounting profession by doing articles with accounting firms. This is a period of practical training given to a clerk intending to become a Chartered Accountant. During the period of articles, the trainee will be expected to pass an under graduate degree in accounting, post graduate degree, Certificate in the Theory of Accounting (CTA), Final Qualifying Examination 1 (FQE 1) and Accounting, Final Qualifying Examination 2 (FQE 2). The period of articles for an “A” level student is five years. If she/he goes to a university in Zimbabwe, the trainee will get a Bachelor of Accounting, Honours in Bachelor of Commerce, CTA, FQE1 and FQE2 as the case may be.

Experience shows that the story is different for PE which finds itself in a fragmented chain where schools do not function well, students are sometimes disinterested and fail to thrive and employers complain about a poorly processed workforce that does not meet the needs and as Mackendrick (1986) observes, even in the 1900’s, PE was not seen as a priority. It is under severe attack and faces competition for time within the school curriculum, Koutsouki (2007). Often, PE is being taught by generalist teachers with little or no preparation in the subject methods. Additionally, budgetary cutbacks are having a negative impact on the time and resources required to teach a quality PE programme. The situation for PE has so deteriorated that many powers including:

The Berlin Physical Education Summit Agenda for Action for Government Ministers, the Punta del Este Declaration, the Council of Europe’s Warsaw Meeting Conclusions and United Nations Educational, Scientific and Cultural Organization (UNESCO) ‘Round Table’ Communiqué together with various World Health Organization (WHO), International Olympic Committee (IOC) and some national government’s initiatives amongst others, demonstrate that it is internationally agreed that issues surrounding PE in schools deserve serious consideration in order to solve existing and future problems. It is imperative that monitoring of developments in PE across the world is maintained (Hardman, 1993; 1994; 1998a; 1998b).

The lack of significant change after the 1999 World Summit on PE, especially in the economically under-developed and developing regions necessitated a 2nd World Summit (Hardman, 2008). Hardman lists the following as justification for the follow-up: continued insufficient curriculum time allocation, perceived inferior subject status, insufficient competent qualified and/or inadequately trained teachers (particularly in primary schools), inadequate provision of facilities and equipment and teaching materials frequently associated with under-funding, large class sizes and funding cuts and in some countries, inadequate provision or awareness of pathway links to wider community programmes and facilities outside of schools in addition to high youth dropout rates from physical/sporting activity engagement. Although many countries have statutory obligations, Hardman (2008), further notes that globally, about a fifth (21%) of countries surveyed indicated that PE was not actually being implemented. It is noted that the implementation is only 33% in Central and Latin America and the Middle East, 40% in Africa and 67% in Asia and North America. The reasons cited for the gap between official policy and actual practice are loss of time allocation in some cases because time is taken up by other competing prioritized subjects, lower importance of school PE in general, lack of official assessment, financial constraints, diversion of resources elsewhere, inadequate material resources, deficiencies in numbers of properly qualified personnel and attitudes of significant stakeholders including head teachers and even the students themselves. While exemption from compulsory class may be common for Religious Education and not other subjects, it is rampant in PE upon presentation of a medical certificate.

The struggle suffered by PE is worldwide. There is still a considerable gap between educational goals and implementation in China (Yao and Jin, 2005) and the causes include inappropriate apparatus, space limits, schools’ low interest and the quantity and quality of PE teachers. In addition, parents rather despise PE and usually support more academic subjects as they often want their children to become professionally skilled and rich. Hardman (2008) reports the following: in Jamaica even though PE is compulsory, it is not being taught in all schools; teachers in Venezuela and England lament that government does not insist on the implementation of PE; in Ireland many primary schools do not offer the required time for PE and the level of implementation is not uniform and a majority of senior students in secondary schools receive little or no PE. According to Rivard and Beaudoin (2005), in Quebec, Canada, some schools use the autonomy they have to even limit the time for PE to a minimum. Kang and You (2005) cited in Hardman (2008) reveal that in South Korea, in high schools in particular, curriculum revision has reduced the number of PE classes.

In Nigeria, PE is considered to be less important than other subjects and is held in low esteem in school and society [as in South Africa, Ghana, USA (Alaska), China] and at university, undergraduates taking the subject are often treated with contempt and held in low esteem by their contemporaries (Salokun, 2005). Regardless of the benefits accrued through participation in Physical Education and Sport (PES) and its popularity
over other subjects, proved through a study by International Council for Sport Science and Physical Education [ICSSPE (2007)], e.g. in England, Columbia and South Africa, judged by its non-exam inability, in Ghana, PE is considered a subject for the “never-do-well” (Ammah and Kwaw, 2005). Students lack interest as well as complain about several issues e.g. monotonously repetitive classes, negative experiences and impacts, lack of commitment to teaching and pedagogical and didactical inadequacies. In their report, Brownson and Boehmer (2004) observe that only one-third of youth attended daily PE lessons.

Although the marginalization of PE is near universal, Hardman (2007), reports that 80% of Africa puts PE at the tail-end of the continuum that shows a comparison of the status of subjects on the curriculum. In a Composite Score Matrix of Subject Ranking table, Marira (1994) reported that In Zimbabwe, PE received no votes (zero) while English and Mathematics received 1, 187 and 1, 030 respectively on the item “Important Subjects to Keep Records”. Doecke (1998) reports that in New Guinea, PE is at a great risk of being lost altogether in the next five years due to the diminished and marginalised position it finds itself in (World Summit Report). It is reported that since the Berlin Summit of 1999 and the Uruguay Declaration of 1999, while there has been some significant developments in economically developed countries, the situation in Africa has been unchanged. It is noted that:

Shortage of facilities and adequately trained personnel are widely reported throughout the continent as are the peripheral value in the curriculum (regarded as no-educational, non-productive use of time, is treated as recreation/play time especially in primary schools) and inadequate monitory inspections in secondary schools (e.g. in Benin, Botswana and Uganda). Generally, priority is accorded to language and Mathematics with even the meagre allocated PE/sport resources often diverted to other subjects. In some countries (e.g. Botswana and Malawi), PE for girls often suffers from optional status with many preferring not to take part, a situation, which is exacerbated by dearth of amenities such as changing rooms. In South Africa, PE as a school subject no longer exists though it is a focus (physical development and movement) of the learning area “Life Orientation” along with health promotion, social development, personal development and orientation to the world of work foci in grades R-9 (General Education and Training Band) (Van Deventer, 2003).

The majority of African countries have either no or minimal provision for PE for children with a disability e.g. in Benin, there is no programme which deals with teaching PE to the children with disabilities. In Botswana, it is observed that cultural beliefs and attitudes do not allow the handicapped to be exposed to free physical activities and sport for fear of their being injured or being ridiculed by their normal peers,........ (Hardman, 2007).

The World summit on PE of November 1999 report confirms that Namibia is in the same boat as other African countries. Hardman (2008) points out that PE is accorded eximinable status in 61% of the countries surveyed globally and in 20% of African countries. Ammah and Kwaw (2005) purport that Ghana’s history of political and military intervention has made it completely impossible for educational policies on PE to be implemented. Successive governments have either covertly or overtly neglected the subject, or relegated it to the background. Government does not show total commitment to the subject area, so budgetary allocation to the sector is woefully inadequate (Hardman, 2008). This financial predicament is international with even California (USA), being threatened. Krupnick (2009), reports that Governor Schwarzenegger proposed trimming state money for PE classes, leaving athletic programmes at the two-year schools in doubt.

Ammah and Kwaw (2005) add that in Ghana, numerous attempts have been made to reduce the number of periods. The timetable slots exist on paper in Ghana, but however, about 30% of schools use them for other subject areas or as free periods. Hardman (2008) says that in South Africa, PE, in some Primary Schools is not presented per time allocation as stated in the revised national curriculum statement. Learning areas such as literacy and numeracy are given extra time in these schools as the development of programmes are the responsibility of the schools and can be discarded at the discretion of school administrators, as is also the case in Botswana (Mokgwathi, 1999) and Zimbabwe (Muswazi, 2006).

Mokgwathi (1999) also reports that in Botswana, PE is supervised by teachers with minimal training. Elsewhere in Nigeria, non adherence to policy is partly related to negative attitudes of the pupils and some teachers and to general lack of teacher and head-teacher interest. Salokun (2005) found that theoretically, five weekly lessons... were recommended for elementary and secondary school.... Unfortunately, however, at neither level is the weekly workload really adhered to.

Although the District Commissioner said that her office was actively monitoring schools to ensure that sport is taken seriously as is the case with other subjects, in a bid to enhance the physical and mental development of the pupils (Lusaka Times, June 23, 2008), Ngombe, reporting for the Lusaka Times (13 July 2007), says that in Zambia, government made a decision to withdraw their funding of school sport. Government had last funded school sport in 2005 and that schools were only allowed to buy equipment for PE because there
was a Presidential directive to do so (http://www.lusakatimes.com). This was in spite of the announcement by the President of Zambia to re-introduce PE into the mandatory school curriculum as a pillar to foster education, health and personal development. Reporting for The Post Newspapers Zambia (13 January, 2010), Zulu says that in many neighbourhood and state run schools, children are only exposed to football, netball and athletics during sports activities (http://www.postzambia.com/post-print_article.php). Eighty six percent of Africa is challenged by low or poor levels of maintenance of existing teaching facilities (Hardman, 2008).

Although Chide, spokesperson for the Ministry of Education says that health and PE are still a part of the school curriculum, Lam (2011), says that with the focus primarily on Science and Mathematics, PE tends to take a backseat in the school curriculum and that schools in Malawi have increasingly cut back on PE programmes. However, in reaction to the noticeable decline in the importance of PE in the school system and blaming it on the lack of specialized teachers, Chide who says that the ministry had made moves to correct the development, also gave assurance that Malawi had begun training specialized teachers through Domasi College of Education.

Development of Value Chain since 1985

Value chain is a connected series of organizations, resources and knowledge streams involved in the creation and delivery of value to end customers and its objective is to position organizations in the supply chain to achieve the highest levels of customer satisfaction and value while effectively exploiting the competencies of all organizations in the supply chain (http://www.ventureline.com/accounting....). Although Porter, who called them a “Value System” (Hamacher, 2011) seems to have publicized value chain strategies, he was not the first to have used the concept (Hansen, 2008). Agreeing with Sturgeon (2000) as well as adding to Porter (1985), van der Merwe and Cronje (2004) say value chain is a systematic approach to examining the development of competitive advantage. Porter focuses on the added value that each activity contributes with. His model consisting of four support activities which are i) infrastructure ii) human resource management iii) technology development and iv) procurement, form the basis for many later models. Porter also focuses on the contribution to the competitive advantage of the company that each part might make. Stabell and Fjeldstad’s (1998) three models which also have as their base Porter’s four support activities, are based on the value creating logic and they recommend the value shop as the appropriate model when it comes to education as it can prove inspirational. Their belief is based on the fact that education is a continuous circular process. Others agree that:

When you have recognised the need for competence development, you plan and choose the way to get that knowledge, you learn and you test or practise your new knowledge and competences. Then you recognise the need for new knowledge – and the process starts again (Hansen, 2008).

Another step in the evolution of a value chain may be increased specialization among the partners (Sturgeon, 2000). The example given by Sturgeon (2000) is that perhaps in the beginning the processor picked the tomatoes up directly from the growers, but as the chain developed a new partner emerged to focus on aggregating tomatoes and delivering them to the processor so that the processor could focus on what they do best is an illustration that even if the value chain starts small, there is a possibility that it can grow.

Value chain involves marketing which is the buying side of the market while the selling side of the market is the supply side. Too many development efforts focus on generating supply without clear and informed connection to the buying side of the market hence it is important to consider marketing strategies seriously.

According to Hansen (2008) and Sturgeon, (2000), supply chains become value chains when participants form alliances with one another to produce products and services that embody particular values and the organization which can deliver this service, needs to be highly market oriented, act as a consultant and by virtue of networking and alliances, be able to deliver exactly the problem solving processes and educational services that are needed within all parts of the value chain of competence development at the right time and place.

Primary and Support Activities Forming the Value Chains for PE

White (2004) and www.edbarrows.com agree that primary activities are involved with a product’s physical creation its sale and distribution to buyers and its service after the sale. These activities are termed ‘primary’ because they are the most important ones as they add value to the product or those involved in either producing or selling the product. For us in education, primary activities are the direct, value creating activities of PE. It implies that bringing the students into the institution, teaching them, marketing and deploying as well as in-servicing them are considered primary activities.

Citing Porter (1985), Elloumi (2009) believes that the activities of business can be grouped under two headings. The first group is primary activities which of course are those that are directly involved with physical creation and delivery of the product. The value chain typically consists of one or a few primary value (product or service) suppliers and many other suppliers that add on to the value that is ultimately presented to the buying public. (http://www.searchcio.techtarget.com) In education, primary activities are related to the individual learning
process which takes place in the schools including the syllabus, school facilities, classrooms, teacher, time and duration as well as curriculum planning, development of audio visual aids (AVA, information and communication technology (ICT), recruitment of teachers/lecturers, hiring of teachers/lecturers, sourcing of textbooks and course development, module writing and module development. Support activities which feed both into primary activities and into each other could include organizational infrastructure, which is concerned with a wide range of support systems and functions, such as finance, planning, quality control and general senior management; human resource management, dealing with those activities concerned with recruiting, developing, motivating and rewarding the workforce of the organization; technology development, dealing with those activities concerned with managing information processing and the development and protection of “knowledge” in the organization; procurement, which deals with how resources are acquired for the organization e.g. sourcing and negotiating with suppliers (Elloumi, 2009).

So, what are considered the primary activities in the industry of PE? According to Porter (1985), and with slight modifications, the primary activities are:

1. Inbound Logistics/Methodologies - involve relationships with suppliers and include all the activities required to receive, store and disseminate inputs
2. Operations – are all the activities required to transform inputs into outputs (products and services)
3. Outbound Logistics – include all the activities required to collect, store and distribute the output
4. Marketing and Sales – activities inform buyers about products and services, induce buyers to purchase them and facilitate their purchase
5. Service – includes all the activities required to keep the product or service working effectively.

Educational institutions by tradition have their focus on the primary activity related to the individual learning process taking place at the campus. For instance, in university and other tertiary institutions, the content that the student will learn is determined there through the generation of syllabi and regulations. Since PE is a learning activity, they have to be related to the individual learning process taking place in the educational institution. In the school system, primary activities could include school facilities such as the pitches, courts, recreation centres, the teacher, time and duration of the learning period. This is an interesting, but simplistic concept of value chain which has stayed very long in the confines of traditional education, but which has not successfully done much for PE. A business approach is preferred as PE should develop into a business since it culminates to sport.

Support activities do not produce goods in the direct sense. It involves activities such as administration, human resource management, information technology management, purchasing and procurement as well as research and development. The support activities support the primary activities. They provide the assistance required for the primary activities to take place (Porter, 1980; White, 2004). However, there should be an interdependency of the activities as understanding the interdependencies helps to identify levers which the company can use to better coordinate activities to serve their customers and to become more effective in execution (White, 2004). Porter lists the following as support activities:

1. Procurement – is the acquisition of inputs or resources for the firm
2. Human Resource management – consists of all activities involved in recruiting, hiring, training, developing, compensating and (if necessary) dismissing or laying off personnel
3. Technological Development – pertains to the equipment, hardware, software, procedures and technical knowledge brought to bear in the firm’s transformation of inputs into outputs
4. Infrastructure – serves the company’s needs and ties its various parts together, it consists of functions or departments such as accounting, legal, finance, planning.

The two categories of activities in value chain (Porter, 1985)
The Connection of Partners to Each Other and to the Demand Side of the Market

According to Porter (1985) and Morden (1999), value adding activities are not independent, but inter-related and inter-dependent within the value chain. Many agree with Porter (1985) that value activities are related by linkages within the value chain. Linkages are relationships between the way one value activity is performed and the cost or performance of another. Porter notes that value analysis cannot be sufficient to guide strategic decision making as the linkages between the different activities are also essential. Citing Porter, many including Hergert & Moris (1989) and Day & Wensley (1988) maintain that the linkages among activities are as important as the activities themselves to a company’s competitive advantage. Competitive advantage therefore, may derive from the following:

- Taking total advantage of the use of resources/capabilities required to accomplish linkages by seeking more efficient and effective ways for doing so
- Coordinated relationship between the distinct activities that are inter-related by the linkages
- The emphasis on identifying the sources of sustainable competitive advantage and developing positional advantage

For success, risk sharing is important. Mature chains with long standing trusting relationships often develop ways to share risk along the chain. For example, members of the chain may agree to set up an emergency security-system to cover unforeseen events like high-jacking that may threaten the transportation of the product. Willingness to share risk to protect long-term investments in relationship building is one indicator of a mature value chain.

In a value chain, each independent partner is known to every other partner and they are all connected to the demand side of the market. Everyone works for the shared goal of the value chain and relationships among partners are constructed on collaborative principles based on interdependence and trust. In a value chain, partners share information with each other that they do not necessarily share in supply chains e.g. about practices, customers, cost of doing business and even developing an insurance system of some sort. For instance, industry covers its workers in case of many sorts of work-related mishaps. You find that many companies contribute towards group social security funds or a national fund for that matter, which can compensate a worker when she/he gets injured. In Zimbabwe, in addition to group funds, there is also a National Social Security Association (NSSA) which caters for workers nationwide. The absence of companies contribute towards group social security funds or a national fund for that matter, which can compensate a worker when she/he gets injured. In Zimbabwe, in addition to group funds, there is also an established National Social Security Association (NSSA) which caters for workers nationwide. The absence of this connection or linkage is clearly evident in PE and a probable reason could be that no “end user” cares much for the so called end product in PE at whatever level and this could be so because of a variety of reasons among which could be that the product in its current state, cannot benefit them. An obvious risk that can be encountered in PE and sport is injury which may occur due to a number of circumstances including improper use of equipment (when it is available), inadequate facilities, under-trained teachers and coaches, poor application of scientific training methods, teaching techniques or principles. When a student is injured “at work”, there is no immediate back-up facility such as a ready health insurance policy that can facilitate medical attention either from the educational institution, district or even from the government sector responsible. A case in point is that of a student who got injured playing sport for his university. Even though the university paid the hospital bills, a case of a Bindura University of Science Education (BUSE) student fractured while ‘at work’ playing rugby at the 2012 Zimbabwe University Sports Association (ZUSA) games, became the sole responsibility of the BUSE Sports Director’s, with all other ‘partners’, including ZUSA itself taking a back seat.

If the idea by Sturgeon (2000) that value chain can be thought of as a network be adopted, it is logical to consider ‘networking’ with powerful partners who are strategically placed when it comes to making decisions that affect PE. In the event of a mishap such as the student case described above, the ZUSA and not the particular university should have taken charge albeit with some support from the Sports Director. Rather than have organizing committees for competitions e.g. Confederation of Universities and Colleges Sports Association (CUCSA) arrange with a hospital to handle emergencies during a competition with patients or respective institutions footing the bill, such organizations as ZUSA, could have a long standing arrangement where a health insurance company working in conjunction with some doctors specializing in sports injuries, physiotherapists, a special hospital etc. being part of the value chain. This way, anybody wanting to join PES as an athlete, teacher, coach, administrator or technician, will feel safe knowing that they are supported and catered for.

Value chains must cover the whole spatial scale and they must increase in size progressively from the local to the district and regional level. Although Gereffi (1999) seems to emphasize on the inclusion of an international dimension in his definition of the term, this paper feels that districts can develop effective value chains as Poire and Sabel (1984) draw attention to specialized industrial clusters that are successful at the local level. Zimbabwe is off to a good start with cluster resource teachers for PE although complains are that the clusters are rather too big for one person (without adequate resources) to handle. Partners in a value chain work together to meet the demand and they deliver not only a product, but the values that matter to the consumer. Partners should know each other so that they do not become sceptical of the product e.g. wondering where a
teacher trained, what the curriculum was like, whether the trainers were reputable professionals, whether training was thorough etc. When they know each other, they know most if not everything about each other as they share information and make considerable input into each other’s activities.

Transforming the Treatment of Physical Education through Value Chains

PE has the potential to become a powerful contender for competitive advantage in the school curriculum just like Porter (2001) says the internet would as part of a value chain for online learning. If PE should take a cue from the above illustrations, then there is need to conscientize stakeholders to ensure that the product, which is the specialized PE teacher, can be utilized, otherwise schools and parents continue to maintain the status quo of using the generalized others or even abandoning the subject altogether. So far, there is no clear evident market for PE through the student, student teacher, educational institutions, club etc. yet market can be created in a variety of ways. A company that develops a product or service that engenders a value chain by providing a platform for other companies is considered more likely to increase its market share than a company that tries to provide the entire value chain on its own (http://www.searchcio.techtarget.com....). Many institutions or governments for that matter, try to operate a solitary process in their attempt to produce a PE practitioner. For that reason, many tertiary institutions have produced PE practitioners who do not find anyway to go for satisfactory, gainful employment. Clearly, what seems to be lacking is the market.

The stakeholders can create market demand for themselves by choosing what they themselves want irrespective of directives from anywhere including government. For instance, if they see the benefits of PE (which are many), through best practices, they may also want the same thing. It is true that professional associations can facilitate the creation of a market when they set standards about their product that appeal to stakeholders, e. g. when government in conformity with the UN declaration of PE as a right for every child (2005), educational institutions could be encouraged to oblige. When interventions such as MINNEPS III (2004) pledge to provide monitoring and evaluation support to national efforts to improve the status of PE, they become key partners in the value chain that are worth taking advantage of.

Being cognisant of the critical dimensions of value chain and in an attempt to develop the same for PE, this paper matches the distinct stages by Sturgeon (2000) as follows.

1) Receiving and distributing raw materials (student teacher, undergraduate)
2) Converting raw materials into a finished product (training)
3) Identifying customers and distributing the product (deployment)
4) Providing customer support (monitoring and evaluation)
5) The organizational scale (administrative structures)
6) Geographical scale (locality)
7) Productive factors (personnel and other support systems)
8) Governance style (regulations)

Identifying the internal value chain activities

Firstly, there is need to look for discrete activities that create value in fundamentally different ways e.g. course design, programme and course promotion, counselling etc. There is need to have and relook at the course designs and content available in the tertiary institutions to ensure that they provide what consumers might desire and avoid remaining obsolete with courses such as those for physical training when the shift has long been toward scientific PE. It is necessary to identify experts to do promotional activities, student advisement and counselling.

Secondly, to determine which value chain activities are strategic, the advice from Porter (1985), Riley (1987), Shanks & Govindarajan (1993) and Donelan & Kaplan (1998) to consider structural, operational and procedural activities should assist in the development of effective value chains for PE. For instance, PE practitioners should not be stranded with their students and athletes because there is no ideal place to do practicals or laboratory exercises. It would be improper to hire netball facilities in a primary school for use by tertiary students or clubs because their practice would not be meaningful. Many country clubs would have the required facilities, so, funds should be sourced for the purposes of hiring such. If course materials need to be developed, the manpower and facilities need to be identified and be readily available, to avoid a situation where students register for a course only to realize that the teaching staff and learning materials are not in place.

Thirdly, procedural activities such as awarding of certificates, diplomas and degrees should be taken very seriously as they reflect on the credibility of the institution. People must be awarded what they registered for and avoid programmes that change midstream, end abruptly or keep stretching.

Fourthly, the day to day operational activities of the institution must be hazard-free to avoid situations where students attend sessions and the practitioners do not pitch up for some reason, maybe because an expert has not been found. While it may be common that many value chain activities benefit from cost reduction, this

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may not be practical for PE. It should just seek to gain competitive advantage by meeting students’ needs as well as bring job satisfaction for practitioners e.g. by providing high quality courses, programmes and student support services. Even with the minimum equipment and facilities that are provided for PE, many institutions already consider it expensive to run. Considering any more cutbacks would be disastrous. So, to transform it and with the help of partners, more funding should be availed. Students should be offered flexible programme options that can accommodate various life-styles to also include flexible completion times. This may be more possible in Open and Distance Learning (ODL) rather than in conventional institutions, so ODL institutions should consider increasing their enrolments.

It is a fact that PE is among the subjects with the least enrolment in most institutions and one of the reasons is that it is expensive, even for the student because apart from the textbooks that all other students need to purchase, the PE student needs extra equipment such as rackets, special shoes, the use of the gym, unpaid internship etc. Partners such as National Sport Associations (NSAs) and even International Sport Federations (ISFs) can join the chain by both making input into the curriculum as well as subsidising the students. If they make an input in the curriculum and/or even the teaching through partnerships between themselves and the institutions, they will be satisfied with the product and will not hesitate to hire them; after all, they will have invested in them. In a special honours programme, the Zimbabwe Open University gives credit to students who have obtained a sports coaching certificate within the past two semesters with a renowned NSA. Apart from providing a hands-on experience for the student, the association is happy to increase its numbers, give their own training and examination, and be associated with a big institution among other things. Of course, there are other internal logistics to be considered between the two institutions. As has been mentioned above, budgetary cutbacks are a very common and major cause for the lowering of the status of PE so one needs to be warned about any further reductions of that nature. In any case, the above scenario presents a cost-advantage for both the student and the ZOU who only need to pay an exemption fee rather than the whole tuition fee and not pay the tutors from the NSA respectively. This is good management of the value chain as it implies increasing the quality of products and services, while reducing the institution’s costs and increasing revenue, thus increasing competitive advantage. This is an activity that can be adopted because the reduction in cost does not adversely affect strategic advantage. Jackson and Lund (2000) suggest that similar institutions must benchmark against each other to gain cost advantage, acquire good practices and create differentiation advantage. This paper then suggests that institutions must as a matter of principle, overtly compare notes with each other in order to complement and gain from each other and then capitalize on their strengths. The following confirms the fact:

Companies, primarily have to identify the core activities that would give them sustainable competitive advantage and then identify the assets and competencies needed to achieve this advantage. According to Sanchez and Heene (2004), the value chain activities are systematically interrelated and represent value creation. Therefore, a business gains competitive advantage by performing these activities either more cheaply than its competitors (low cost strategy), or in a unique way that creates superior customer values and commands a price premium differentiation (Jackson and Lund, 2000).

The suggestion by van der Merwe and Cronje (2004) is that if the focus for education is on the primary processes, the objective should not only be the development of learning content, but also to focus on the processes involved that make the presentation of this content to the learner possible. In PE, this process is grossly affected by the time allocated to the subject. It has been mentioned repeatedly above that time for PE is an outcome, so, should be the case for PE. Specialists are scarce.
Considerations for the demand

There is no direct demand for PE and yet literature requires that value chain must be driven by direct demand. There is nothing much to drive demand in PE at the moment and therefore, there is great need to improve the product in-order to attract consumers. The establishment of a national association for Physical Education in Zimbabwe, such as the continental one, African Association for Physical Education, Health, Recreation & Dance (AFPHER-D), would ensure some set standards with ripple effects of a product market. It is a known fact that anything that is produced at a high cost has a possibility of also selling at a high cost thus, the implication of high production costs is also high selling price which may make marketability rather not easy. The solution then may be to make production cheaper. Therefore, a way to train PE practitioners at a reasonable cost becomes inevitable as demand is mostly the ability to pay. Once marketing is done successfully, demand can be met in a variety of ways such as the idea of peripatetic teachers, Open and Distance Learning, Virtual Open and Distance Learning (VODL) which is happening in Zimbabwe. Consumers like to move along with times and so the use of modern technology should not spare PE. Practitioners must be trained in the use of modern technology to enable them to access new trends and current information. Institutions should invest in computer laboratories and facilities for use by candidates in higher degree programmes. They should also be afforded facilities to enable them to purchase laptops and other gadgets so that their use become habitual rather foreign.

As the success of the institution depends on the success made at each of the steps along the way to the final product, there is need to ensure that the best is achieved at every step, so, there is great need to improve the various components of the chain.

In the development of value chain, PE practitioners must take advantage of the benefits obtained as a result of participation in the subject. PE suffers lack of or stolen time on the timetable by other subjects, yet while all other subjects may only be academic, PE also provides a rare and unique opportunity of teaching values which can complete the education of one to become wholesome. Practitioners should market the product as a complete, wholesome human being. Porter (1985) says:

A company’s profitability is a function not only of industry conditions, but also of the amount of value it creates relative to its competitors. A firm can achieve competitive advantage if it possesses ‘capabilities’ that allow it to create not only positive value but also, additional total value than its competitors (Hooley et. al., 2004; Besanko et. al., 1996 and McGoffog & Wadsley, 1999).

Additionally, Porter (1985) advises that:

By understanding why a company can create value and whether it can continue to do it in the future is a necessary first step in diagnosing a firm’s potential for achieving a competitive advantage in the marketplace. Therefore, a firm must understand how its products serve customer needs better than potential substitutes: the technology of production, distribution and sales; and the business’ costs (Hitt et. al., 2007; Spanos & Lioukads, 2001).

Many times, PE programmes do not seem to succeed as practitioners cannot distinguish the head or tail in them. There are no clear development objectives. It seems the aim in many programmes is just play and one does not expect to benefit. To transform PE, Pearson’s (1999) advice that a competitive strategy is focused on the top-level strategic objective of a company with the purpose of gaining competitive advantage, must be taken seriously. Thus, if a company wishes to achieve a competitive strategy, it must encompass every aspect of the business so that every manager and employee knows its objectives and as such, every decision and action must be consistent with it and strives for its achievement. At every step of the chain, PE practitioners should know where they are going and where they are coming from. They must be directed so that everyone works toward the same goal. There is a danger that when goals are not clear, the tendency is for partners to drop out, students drop out, athletes change clubs and sponsorship is lost. Practitioners should possess such efficacy they are able to comprehend and enunciate the benefits that any partner in the chain can accrue. Managers and other key persons within any organisation have considerable influence on the vision and strategy of the organisation.
judgement and values together with their creativity will lay the foundation for the strategy, so should be the case in PE.

Porter’s model has been criticised for a variety of issues among which is the complicated task it poses when a company requires to investigate its competitor’s value chain as it is not easy for a company to access internal information in-order to carry out a value chain analysis. It is assumed that investigating the value chain of its rivals has to depend on collecting external data and information which is even more difficult (Mohamed, 1998; Partridge & Perrin, 1993 and Hergert & Morris, 1989). PE can take advantage. All the other ‘more preferred’ educational programmes are under the same roof as itself and therefore data and other information can be obtained ‘internally’ as all records should be with the same administration.

PE can benefit from the example of success theories of value chain in business so that it can be treated like a business. The pertinent point raised by Hansen (2008) that there is a commitment to the welfare of all partners, should be noted if value chain is to succeed. Various success examples demonstrate such commitment. It seems it is a case of ‘scratch my back and I will scratch yours too’!

Microsoft and its Windows operating systems, the nucleus of the personal computer desktop for which much business software is developed, is often cited as a prime example of a company and product that drives a value chain. This particular value chain was reported in a McKinsey study to be worth $383 billion in 1998, although Microsoft’s share of the value chain was reported to be only 4% of the total, (of course, that was still $15.3 billion). Dolan and Humphrey (1999) document the fresh vegetable value chains that connect farmers in Africa to large retailers in the UK (Sturgeon, 2000).

Value chains have been used successfully in telecommunication, radio communication and in health-services (van der Merwe and Cronje, 2004). Delta Beverages and its opaque beer is a success story in Zimbabwe. Delta Beverages identifies farmers whom they supply with sorghum seed, fertilizers and insecticides. They even provide agricultural extension officers who operate as consultants for the farmers as well as monitor the progress of the crop. They even organize logistics for harvesting. The Cotton Company (COTTCO) of Zimbabwe has developed several successful value chains. One of the chains involves small scale farmers of the crop. Like Delta Beverages, COTTCO identifies the farmers, supplies all the inputs to them including seed, fertilizers and pesticides as well as expertise in the form of agricultural extension officers who monitor and advise accordingly depending on the situation and condition of the crop. The farmers organize the harvesting and pool up to transport the product to COTTCO. Upon delivery at COTTCO, the farmers are paid by COTTCO for the value of their crop, but less the cost of transportation which is paid directly to the transporter. In the case that some farmers cannot resist the temptation of making a quick buck and sell of the inputs, COTTCO simply does not pay them and so they do not benefit from chain. The example of collaboration between the PAAB in Zimbabwe, industry and the education system mentioned earlier is an example that PE can benefit from. PE should identify potential partners who can include tertiary institutions, schools, NSAs, academies, industry that deals in sports wear and equipment, industry that deal in the construction and maintenance of sport facilities, medical groups such as those for physiotherapists and sports doctors, industries dealing in nutritional drinks and foods who they can entice into joining its value chain. There is obviously something to gain for each of the partners as they share a common interest one way or the other. The inclusion of such professional groups can guarantee a major face-lift and a new lease of life as they add value to the subject.

The competitive forces that are a common sight in business are also encountered in PE. In business the rivalry among existing competitors seems to intensify. Porter uses the idea of five competitive forces to analyze the competitive environment. Lussier and Kimball (2009) citing Porter (1985) who refers to this phenomenon as “the scrambling and jockeying for position” acknowledge that industries vary widely in their business makeup, competitive situation and growth potential and that there is need for different sport management strategies in different areas. Lussier and Kimball (2009) give the example of Nike, Adidas-Reebok, Puma and Fila companies, which are rivals and competitors in the athletic footwear industry and which need to anticipate the moves of their competitors. The fear that there could be new competitors in the field constitutes another competitive force in business and it may require already established companies to defend themselves. Potential competitors may find it difficult to enter the market although some persevere and make it. Lussier and Kimball’s (2009) example for the ‘potential development of substitute products and services’ as a competitive force is Crocs, which are slip-on-shoes that have become popular in water sports and as a fashion item. They say Crocs normally come in bright colours and are easily recognizable. They note that Crocs recently formed an alliance with the National Football League (NFL) of America to sell the shoes in professional team colours.

Whether or not a supplier has bargaining power is another competitive force. If a business has only one supplier the business does not have much leeway for negotiation, but if there are more players, there is a good chance that the business can get a better deal as in an attempt to compete against each other, the suppliers may be cautious and not be too outrageous in their prices. Nevertheless, if a supplier is like Nike (American) whose manufacturers for sneakers are cheap private contractors in Vietnam (Lussier and Kimball, 2009); it has a great advantage over its competitors who must make up for high production costs. On the other hand, the ability of the consumers to bargain, presents another competitive force. Consumers prefer fashion, better prices, high quality, convenience etc and so, they will follow where all that and more is readily available. If we should follow the
argument above, consumers will opt for Nike. Accordingly, if PE is to be transformed into a business, some work has to be done in order to cater for the competitive forces.

The scenario in PE is that there is rivalry between trained teachers, coaches and even untrained coaches who in a number of cases, seem to perform better that the trained teachers described above. The coaches are preferred because they specialize in a particular sport whereas teachers remain rather generalized. This paper is not blaming or despising the PE teachers, but it is encouraging them to continue improving themselves by taking supplementary courses in addition to their ‘formal’ training. Above all, this paper serves as an appeal to responsible departments of education and similar institutions to identify potential partners who can join the chain to improve the curriculum to ensure a polished product who can handle the situation effectively. The second form of rivalry that PE encounters is the competition with other curriculum subjects which are more preferred and which benefit from the time snatched from itself. In addition to improving the practitioner, PE should identify partners who can invest and benefit from adequately equipping it, upgrading its technology (ICT) etc. Trained PE teachers are at the risk of being substituted by specific sport coaches especially in institutions which can afford paying lucrative remuneration. Potential new competitors come in the form of specially trained teachers being produced by private institutions as well as those with foreign qualification, which is often considered superior to local ones. Generally, the PE consumers in Zimbabwe do not have much power to bargain as they do not have much to choose from. For this reason, the consumers choose to forego the subjects. The suppliers’ power to bargain is minimal as their product is not very marketable.

Many times, you hear people saying that they are into PE or sport administration because they have an interest, but it is not enough to have an interest. That is probably the main reason why practitioners in PE and sport are generalistic. This is also why PES is taken for granted and not seriously by many including even some of the practitioners themselves. It is important to give PES some weight if it is going to be transformed into a serious business and not be taken as a pastime. Practitioners need to specialize in order to develop the interest and keenness to investigate and pursue current trends in the subject so as to avoid being left behind and become obsolete in their operations. Whether PE is a science or an art must be clear. In many places like Zimbabwe, institutions put it under any faculty or department for their own convenience so that when the dean, chairperson, head of department or lecturer in-charge is changed, the next person can decide to move or not to move the subject. In one institution PE can be under the humanities, or under sciences, or under education, or under social sciences etc. What can help to make a professional decision is the formation and recognition of a professional association for PE where informed decisions can be rationalized, so, giant steps should be taken in countries like Zimbabwe to ensure that this omission discontinues. An association of this nature will assist in developing standards for purposes of quality control to ensure among other things that scientific methods are used. It will spearhead research in the subject and many companies are interested in research findings to guide their operations. Many established companies would not be attracted by business that has no quality controls. In some countries, the National Olympic Committees (NOC) are partnering with educational institutions only to advance the spread of Olympism (adopting values as a way of life) and not to develop well rounded PE practitioners, yet, they could actually join the chain and enjoy considerable competitive advantage. For instance, in many developing countries, sport administration courses are still run by the NOC itself when tertiary institutions can run them in conjunction with the NOC to give the qualification more weight. This could be an example of how value chains can use the strength of the chain to co-invest in the infrastructure needed to reliably deliver the product or service. With such networks, PE graduates will have a wider choice of professions and career paths.

SUMMARY

Various authorities have offered a variety of definitions for value chain, but all of them emanate from Porter’s (1985) idea of value systems. Value chain is the beginning to the end of the production of goods where several parties are involved, each with a significant part to play to ensure the best product at the end of the process. Although many mitigatory interventions have been put in place as an attempt to salvage the subject worldwide, as a curriculum subject, PE still has many odds against it, ranging from inadequate budget, the least time allocation on the timetable, inappropriately trained practitioners and uninterested students to name but a few. Since 1985, value chains have evolved to also include increased specialization among the partners. Support activities feed primary activities and each other in value chains. Primary activities are involved in the direct production of the goods while support activities do so in an indirect way. Linkages in value chain are relationships between the different activities and their performance and in mature chains, they assist in risk sharing. The paper very strongly encourages the transformation of PE into a business by setting objectives which are clear to all involved and there has to be assurance that every partner and at every step in the chain performs towards their realization. It is these objectives that determine whether potential partners are enticed to join the chain or not.
RECOMMENDATIONS

In order to reduce the cost of production, governments should heavily subsidise the training of PE practitioners. The corporate sector should be encouraged to invest in educational institutions by developing adequate facilities and providing equipment.

To ensure that the product is readily absorbed into the industry, stakeholders such as schools, clubs and industry itself should be involved in syllabus drafting and programme development for both educational institutions and not leave it entirely to government.

There should be a variety of programmes related to PE e.g. technicians, grounds curators, public relations, counsellors, coach educators apart from the usual teachers, coaches and sport directors at the training level.

Close monitoring by professionals of the development of PE and the adherence to the timetable as well as ensuring that allocation for the subjects is adequate on the timetable is essential. For success, risk sharing is important, partners should cover each other’s back.

The formation of a national association for PE should be treated as a matter of urgency.

REFERENCES


