International Journal of Education and Development using Information and Communication Technology (IJEDICT), 2022, Vol. 18, Issue 1, pp. 200-212

Beyond Boundaries of Cultural Capital in Determining the Inclusion of Information Technology in the High School Curriculum

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ABSTRACT

Few high schools offer Information Technology (IT)) as a subject in South Africa. This paper used Bourdieu's conception of cultural capital to investigate the reasons why many public schools are shunning away from including IT in their curriculum. Data were collected using a questionnaire and analysed using ANOVA, to determine whether cultural capital influences choosing IT as one of the subjects in the school curriculum. The results showed that public high school principals view IT as a subject that should be done in schools where there is medium-to-high cultural capital status. It is a challenge for schools with low cultural capital to offer IT among their subjects as it is not practiced by the community or society in which the schools exist. The paper concludes by recommending that there is room for the so-called 'low cultural capital' schools to offer IT among their subjects despite the challenges they are facing. Cultural capital does not hinder students' performance. Students from low cultural capital communities can achieve good grades even though they learn under difficult circumstances of inadequate educational resources.

Keywords: *cultural capital; Information Technology; curriculum; ANOVA*

INTRODUCTION

"One generation plants the trees, and another gets the shade" – Chinese proverbs

The education system is in the middle of an academic evolution, propelled by ubiquitous computing devices and advanced computational infrastructure. These developments are progressing at an exponential rate and are contributing to the lives of human beings, including in the education system. Many governments in the world are encouraging the use of digital technologies in the classroom to enhance learning. Yet many public schools in South Africa, particularly those that are not fee-paying schools have not introduced Information Technology (IT) or Computer Science (CS) in their curriculum. The subject discipline of IT/CS is concerned with computation. Computer Science is concerned with problem solving and how to solve issues more effectively, efficiently and with quicker speed. Furthermore, CS entails "algorithm abstraction, data and knowledge generation, and programming" (Cuny, 2011). Computer science is more than just using a computer or writing programming codes; it is anchored in computational thinking. Issues such as identification (describing a problem), abstraction (focusing on the information needed), decomposition (breaking down the problem into smaller and manageable components) and debugging (finding faults or mistakes) procedures are all part of computational thinking.

Even though high school students, according to Williams & Larwin (2016) are "considered digital natives, as they have grown up with technology readily accessible to them for personal use" (p. 143), they are not given adequate opportunity to move towards that space of using technology in solving problems. School authorities thwart the zeal and passion these students have for technology use by not introducing IT/CS as a subject in schools or integrating technology in teaching, although students seem to be ready to use digital tools to solve complex situational problems. Despite the increased usage of digital devices in the classrooms, integration of IT/CS into the regular school curriculum remains a challenge (Ali, 2020; Amin and Zaman, 2021). IT/CS

is considered an optional course at schools that offer it, mostly for students who have excelled in math and natural science in Grade 9.

Some high school principals have limited knowledge of what IT/CS is, and some seem to be nervous about introducing the subject in their schools as it is expensive to support, and some consider it as a subject that should be done by students coming from the white community (affluent community). Webb, Davis, Bell, Katz, Reynolds, Chambers & Sysło (2017) found that there is a lack of knowledge of the relevance and functions of computer science in the curriculum. The world over expects as many computer science specialists as possible to work in various sectors of the economy to promote innovation and development.

Education departments must not inhibit the social and cultural change brought by technological advancements; rather they should provide opportunities to enable the drivers of cultural change. This means the education system should avoid imposing subjects that learners are not interested in. The unequal terrain of schools in terms of social and cultural capital appears to be the reason schools are interested in introducing IT/CS as part of the curriculum. This paper is scrutinizing the concept of cultural capital as a 'catalyst' that causes many school principals to hesitate to introduce IT/CS in their schools. Teaching learners IT/CS provides them with a lot of advantages, and the use of IT/CS in disciplines, such as math, physics, biology, and technology, to mention a few, may enhance the ability of learners to solve complicated issues, collaborate, think critically, and involve each other in problem solving. The use of digital technology in the twenty-first century provides learners with the skills they need to succeed in a society that is quickly changing and altering, all driven by technology. To put it another way, IT/CS prepares learners for the employment market of the future, which will be dominated by the application of technology and the analysis of big data.

CULTURAL CAPITAL

The environment we live in can be influenced by forces such as" position", "legitimate authority" and as defined by Harker, Mahar & Wilkes (2016), capital is the "logic which orders such forces". The definition of cultural capital is broad, and according to Bourdieu (1986a), it includes material things (that have symbolic value) or untouchable (but culturally significant) such as prestige, status, and authority. Further, it includes goods such as art, education, and forms of language. Thus, Harker, Mahar & Wilkes (2016) note that according to Bourdieu, capital extends to social relations within a system of exchange (all the goods, materials, and symbols) in a social formation. The field is bounded by objective power relations that have a material base. Bourdieu sees capital as a basis of domination. Cultural capital is the worth an individual's cultural knowledge has in a field or setting. Various forms of capital can be exchanged for other types of capital. Symbolic capital is essential because it can be converted, resulting in different forms of capital that are seen as legitimate. In a society, the status and prestige of a person are influenced by what he/she possesses, and this can lead to recognition by the society in which he/she lives. According to Bourdieu, those who possess higher amounts of capital may have more opportunities in society. Those individuals are likely to be in high positions and may command authority in the societies in which they live. Parents with higher education, social and cultural capital are more likely to help their children in achieving their educational capital. They may pass or preserve this prestige through socialization in their homes and schools. Children may also learn from their parents' behaviour patterns. This practice develops into a social network with other professionals that provide their experience and advice to children in choosing future careers. Generally, parents send their children to fee-paying or private schools where they may obtain more social capital. This is a calculated move so that children with better cultural capital are congregated together (social stratification systems) to maintain the group status quo or identity.

Lachney (2017) notes that according to Bourdieu (1986), the word 'capital' is generally associated with "financial exchange", "wealth, labor and property that can be readily converted into money"

(Lachney, 2017, p. 177). Breinholt and Jæger (2020) view cultural capital as something that "can be converted into other forms of capital through exchanges in material and symbolic markets" (p. 30). The economic capital of a student's family may determine his/her rate of academic success and in addition "exhibit different modes and patterns of cultural consumption and expression…" (Bourdieu & Wacquant, 1992, p. 160; Bourdieu and Passeron 1977). Therefore, we note that cultural capital concepts such as knowledge, identity, and preference are learned at home and reproduced at school. This is alluded to in Bourdieu's theory of social reproduction and cultural capital that the "culture of the dominant class is transmitted and rewarded by the educational system" (Lamont & Lareau, 1988; Dumais, 2002, p. 44). Schools do not provide new knowledge; rather they re-transmit what the students have already acquired at home because of the social class they are positioned in. However, students coming from less privileged families will have to work harder to achieve social mobility. Students from low-class families are academically penalized as they need first to acquire the knowledge and skills to negotiate their educational experience (Lamont & Lareau, 1988). Parents with limited cultural capital are confined to local or non-fee-paying schools for their children, a situation whereby the children are disconnected from other sectors of the society and receive the level of education that is low when compared to children from families with high cultural capital.

INFLUENCE OF CULTURAL CAPITAL IN IT/CS IN THE SCHOOL CURRICULUM

Cultural capital, in one way or the other, may contribute to the uneven academic achievement among students coming from different social class backgrounds. Roksa & Robinson (2017) noted that Bourdieu argued that "schools reproduce inequality by rewarding cultural capital of the dominant social class" (p. 1230). The education system takes advantage of the cultural capital of belonging to the high class in the society and turns it into 'academic success'. The schools are situated in an environment where the dominant group's cultural capital has high expectations of their children and thus the school has the mandate to achieve those goals. The inequality between the schools is perpetuated by the social class structures existing in the society. The schools situated in high-class to middle-class environments have different expectations and values from those situated in the low-class bracket (Bowles and Gintis, 1976). Parents and educational stakeholders from the dominant class (affluent) work together with the school principals in determining the subjects their learners should take and they are supportive in that regard, but parents from low-class communities leave the day-to-day running of the school to the principals. They are the ones deciding the subjects that could be done by the students. Thus it could be stated that school culture correlates with students' successes and failures.

LITERATURE REVIEW

Cultural capital is referred to as 'the knowledge, tastes, and linguistic competencies of the dominant social class' (Lamont and Lareau, 1988). Lareau and Weininger (2003) selected articles and books and tabled many definitions of cultural capital from various authors (p.570-573) some of which are shown below:

> *"instruments for the appropriation of symbolic wealth socially designated as worthy of being sought and possessed"* (DiMaggio, 1982)
>
> *"informal academic standards by which teachers reward more general skills, habits, and styles" (Farkas, Grobe, Sheeha & Shuan, 1990)*
>
> *''competence in a society's high status culture, its behavior, habits, and attitudes'' (Katsillis & Rubinson, 1990).*

> *"dominant cultural codes and practices, linguistic styles, aesthetic preferences, styles of interaction"……institutionalized as legitimate (Aschaffenburg & Maas, 1997)*
>
> *"high status cultural signals, such as attitudes, behaviours, preferences, and credentials,... commonly used for social and cultural inclusion and exclusion" (Kalmijn & Kraaykamp, 1996)*
>
> *"widely shared high-status cultural signals (behaviors, tastes, and attitudes)" (De Graaf, De Graaf, & Kraaykamp, 2000)*
>
> *"high status cultural signals, such as attitudes, behaviors, preferences, and credentials,…commonly used for social and cultural inclusion and exclusion" (Eitle & Eitle, 2002)*
>
> *"familiarity with the dominant culture in the society, and especially the ability to understand and use 'educated' language'… importance of linguistic competence"* (Sullivan, 2001)

Thus, cultural capital can be viewed as cultural signals reflected by people's habits that comply with societal expectations and standards. Schools are institutions that reproduce and nurture those societal values and preserve the 'legitimized knowledge' operating in a home environment, consequently affording the children secure advantages in the educational system (Vryonides, 2007). The schools and children in the affluent community will always be valued as wealthy socially and regarded as 'first preference' by those coming from the low-social class. Since IT/CS is a relatively new subject in the education system, schools situated in the high-social class environment tend to include such subjects in their curriculum, and schools in the environment of the low-social class keep their traditional subjects (such as English, Maths, Science History, and Geography). There is limited research in South Africa on high schools that include a subject like IT/CS in the public school system except for a few elite public schools, and the private schools. Cultural capital contributes to social reproduction. Public high schools tend to consider their resources (capital) vis-à-vis the relatively high operational costs associated with maintaining a computer lab, which quickly discourages them from introducing IT/CS. Yet private schools and a few affluent public schools view the introduction of IT/CS as an opportunity to maintain their elite status, culture, or status quo. Principals in many public high schools should break the impasse of cultural capital and take advantage of new technologies of ubiquitous computing. The inclusion of IT/CS in the school curriculum has potential to result in large numbers of students studying information technology-driven courses such as Information Systems, Computer Science, Informatics, and Computer Engineering among others at the university level, leading to an increase in technology graduates and in turn, the growth of the economy. The early research has shown that computational competencies are high demand areas in the fields of information technology (Cuny, 2011). In the early studies, Cuny (2011) also noted that students should be technology creators, adapt technology to meet their ends, and express themselves computationally. Doing IT/CS at high school prepares students to be future software engineers and IT innovators, engineers or biologists, and chemists to mention just a few. Unfortunately, since the earlier studies were conducted, this subject has not penetrated the school curriculum. Even in the developed countries, IT/CS computer has not been counted as a core subject for high school students like mathematics or science (Lachney, 2017; Cuny, 2011). However, it is undeniable that IT/CS has given rise to technology research and innovation. IT/CS has swiftly revolutionalised the world by providing digital technologies that impact how people interact, connect, and do their daily work and business (Ryoo, Margolis, Lee, Sandoval, & Goode, 2013).

The opportunities to learn IT/CS in South Africa are unevenly distributed. Most of the public schools in low-cultural capital areas, mainly black communities, have limited access to technology. Many

public secondary schools have the technology, but their curriculum does not include subjects in IT/CS. Instead, learning is limited to basic user skills such as computer literacy or computer application technology (CAT) that is examinable at the end of secondary education. The students from high cultural capital environments are the ones who are enjoying learning IT/CS and are using the skills learned to solve problems critically. Fewer public secondary schools offer IT/CS leaving few students studying the subject despite the increasing demand for computer professionals. This trend disadvantages students coming from the low socio-income bracket, who leave high schools and enter the technology driven job market without knowledge or understanding of how to use the technology (Bass & De Jong, 2020).

The correlation between Math, Physical Science, and IT/CS provides cross-curricular connections which allow subject integration. Students can use the skills learnt in addressing real-world problems (Bozick, Srinvasan, & Gottfried, 2017). IT/CD enables students to think about whatever problem they are analyzing logically, use abstraction, and algorithms (Fluck, Webb, Cox, Angeli, Malyn-Smith, Voogt, & Zagami, 2016). The inclusion of IT/CS may help students think better and provide a better picture of the courses that they would like to pursue in higher learning institutions. Bringing IT/CS into the school curriculum is likely to give students a more realistic view of the benefit that the subject has and better prepare them for pursuing careers in or around the computing discipline and helps equip students to be more savvy in Science, Technology and Mathematics in the future (Weintrop, Beheshti, Horn, Orton, Jona, Trouille & Wilensky, 2016). As technology use grows in all sectors of work, so do computer-based jobs, and school principals need to consider or review how they should participate in preparing students in their schools to obtain the necessary skills needed to train them to enter these fields.

METHODOLOGY

A non-probabilistic snowball sampling technique was used to recruit the participants. Permission to conduct the research was obtained from the school principals, who in turn, were the target participants. The principals were emailed the request to voluntarily participate in the study. A consent letter was also attached for the principals to confirm that they were willing to participate in the study. The principals were informed through the email that there were free to withdraw from the study should they feel so and there were promised that their information will never be disclosed. An online questionnaire was developed and administered to the high school principals to gather their perceptions about the inclusion of IT/CS in their curriculum and they were requested to further share the questionnaire with their professional peers in their networks. The study used the One-Way Analysis of Variance (ANOVA) technique to confirm the hypothesis. A URL link to a google form was used to access the questionnaire. The questionnaire was distributed to 130 principals who had an email address in one province of South Africa and a total of 51 provided responses. All participants were principals of quintile 5 schools with either IT or CS in their curriculum. The information gathered was grouped as per five (5) districts in which the respondents were located as shown in Table 1 below.

***Table 1**: Sample Means by District*

Districts	IT/CS is suitable in affluent communities	There is shortage of qualified IT/CS teachers	It's expensive to run digital technologies and the Lab
A	11	12	14
B	5	10	6
C	7	6	8
D	10	14	15
E	12	9	6
Mean	$\overline{x}_1$=9	$\overline{x}_2$= 10.2	$\overline{x}_3$=9.8

The districts were pseudo-named A, B, C, D, and E to ensure anonymity. Data were analysed using One-Way ANOVA because the participants were grouped at different levels. The idea was to compare the groups population means to see if a difference existed somewhere among them. In other words, do all the groups of the mean come from a common population, or is one mean so far away from the others that are likely not from the same population, or are all the groups so far apart that they all likely come from a unique population? In addition, ANOVA tries to find out the relative distance between the mean of each group and whether they come from the same overall population. Means are in very different locations relative to the overall mean and each mean relative to the overall dataset. The Null hypothesis in ANOVA tries to establish whether the sample means come from the same population. This does not necessarily mean that the sample means are equal, but that they are likely coming from the larger overall population. ANOVA uses the term variability to determine whether there are any statistically significant differences between the means of independent (unrelated) groups. Two methods were used to calculate one-way ANOVA, that is, calculation by hand and the Microsoft Excel data analysis tool.

Manual Calculation

The manual calculation is detailed below:

Defining Null and Alternative Hypothesis

H_0 : $\mu_1 = \mu_2 = \mu_3$, High School principals consider IT/CS as a subject that is done by students coming from high cultural capital status

H_1: $\mu_1 \neq \mu_2 \neq \mu_3$, High School principals consider IT/CS as a subject that can be done by students in any society regardless of cultural capital status

Test Hypothesis level, α=0.05 (5%)

Overall Mean or Grand Mean: the mean of all respondents taken together.

Overall Mean $\bar{\bar{x}}$=9.67

Since ANOVA is by definition the "analysis of variance", we note that variance is the average squared deviation (difference) of the data point from the distribution mean. Therefore, we took the distance of each data point from the mean, to calculate the SUM OF SQUARES (SS).

Sample Variance, $s^2 = \sum \frac{(x-\mu)^2}{n-1}$

Sum of Squares,$SS = \sum (x-\mu)^2$, sum of squares of the difference of the dependent variable and its mean

Total Sum of Squares (SST)
(total/overall) sum of squares

Components

- SSC (Column/Between/Treatment) sum of squares

- SSE(Within/error) sum of squares

$$N = 15, n = 5$$

$df_{Between} = a - 1 - 3 - 1 = 2$

$df_{Within} = N - a = 15 - 3 = 12$

$df_{Total} = N - 1 = 15 - 1 = 14$

Decision Rule

To look up the critical value, we need to use two different degrees of freedom

$$df_{Between} = a - 1 = 3 - 1 = 2$$

$df_{Within} = N - a = 15 - 3 = 12$

Critical Value= (2, 12) =3.8853 (**from Table**)

If F is greater than F_{crit}= 3.8859, reject the null hypotheses

Calculate Test Statistic

$SS_{between} = \frac{\sum (\sum a_i)^2}{n} - \frac{T^2}{N}$

$$SS_{between} = 45 + 51 + 49$$

$= \frac{45^2+51^2+49^2}{n} - \frac{T^2}{N}$

$= 1405.4 - 1401.7$

$= 3.7$

$SS_{Within} = \sum Y^2 - \frac{\sum (\sum a_i)^2}{n}$

$11^2+5^2+7^2+10^2+12^2+12^2+10^2+6^2+14^2+9^2+14^2+6^2+8^2+15^2+6^2-\frac{45^2+51^2+49^2}{5}$

$= 1553$

$SS_{WTotalithin} = \sum Y^2 - \frac{T^2}{N}$

$= 1553 - 1401.7$

$= 151.3$

$MS_{Between} = \frac{SS_{within}}{df_{between}} = \frac{3.7}{2} = 1.85$

$MS_{Within} = \frac{SS_{between}}{df_{within}} = \frac{147.6}{12} = 12.3$

Calculating F from Microsoft Excel

F_α, df_c, df_E=$F_{0.05,2,12}$= F.INV.RT(0.05,2,12)

=**3.885294**

F=$\frac{MS_{between}}{MS_{within}}$=$\frac{1.85}{12.3}$=**0.1518**

Table 2: *Calculating F*

	SS	df	MS	F
Between	3.7	2	1.85	0.1518
Within	147.6	12	12.3	
Total	151.3	14		

Table 3: *ANOVA Summary Table*

ANOVA: Single Factor						
SUMMARY						
Groups	***Count***	***Sum***	***Average***	***Variance***		
IT/CS is suitable in affluent communities	5	45	9	8.5		
There is shortage of qualified IT/CS teachers	5	51	10.2	9.2		
It's expensive to run digital technologies and the Lab	5	49	9.8	19.2		
ANOVA						
Source of Variation	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Between Groups	3.733333333	2	1.866667	**0.151762**	0.860816	**3.885294**
Within Groups	147.6	12	12.3			
Total	151.3333333	14				

RESULTS

If F >3.8859, reject the null hypothesis.

Since F<3.8859, we accept the hypothesis and ***conclude*** *that high school principals consider IT/CS as a subject that is done by students coming from high cultural capital status* $\bar{\bar{x}}$=9.67

INTERPRETATION OF RESULTS

The sample means of each group, $\bar{x}_1$= 9, $\bar{x}_2$= 10.2, and $\bar{x}_3$= 9.8 appear to be closely related to the overall mean, $\bar{\bar{x}} = 9.67$ which suggests that they are coming from the same population and there is no outlier. Generally, the results show that high school principals believe that IT/CS can thrive well in schools that are in communities where there is a dominant high class. They believe that the

acquisition of cultural capital is intertwined with the social phenomenon in which it takes place, thus students attending schools located in such communities perform better academically and exhibit high chances of controlling economic positions in the future. IT/CS is a relatively new discipline and is associated with digital technologies, a scenario that is prevalent in high social communities. Thus, it fits the schools in those communities that introduce IT/CS in their curriculum because they have the required resources. It is their social capital that they have formed, developed, and nurtured making it possible to accrue by virtue of possessing a durable network of institutionalized relationships that has mutual recognition.

Many of the school principals believed that the expenses associated with running computer labs is huge and can drain school financial resources. The lack of technical support, unqualified teachers to teach IT/CS, and the lack of funds, are some of the issues that make them hesitant to include IT/CS in their mainstream curriculum. The study conducted by Dlamini & Dewa (2021) revealed that "ICT infrastructure have not been utilized fully for teaching and learning" (p. 30) in South Africa. The main reason is that there are few qualified teachers in the discipline of IT/CS despite the influx of digital devices in schools.

The study also established that principals still believe that IT/CS should be offered by schools that are in high cultural capital communities. They believed that cultural capital is the biggest determinant of educational success particularly in a subject such as IT/CS. Despite the opportunities that IT/CS offers and the view that it is the driver of technological innovations across all disciplines and aspects of our lives (Ryoo, Margolis, Lee, Sandoval &, Goode, 2013), many public high school principals in South Africa are moving slowly toward incorporating IT/CS in their curriculum, hiding behind the 'low-income' status of the students. We noted earlier that there is a view that cultural capital can be learned and suggest that the role of education is to develop this potential. In other words, students can achieve higher grades despite coming from environments of low cultural capital. With determination and encouragement from teachers, students against all odds or deprivations, can be the victors in their studies.

The status quo is to preserve positions of dominance over the less privileged. Social capital has to do with networking, connections, group memberships, and familial relationships (Seiter, 2008). However, both cultural capital and social capital tend to reproduce the existing order in the environments in which they exist (Lachney, 2017). According to the principals, students acquire the dominant form of cultural capital at their homes and bring them to school through knowledge and networking, which is opposite to the students who come from a less dominant social class, because such concepts are not a common practice among themselves. Students from affluent communities have high chances of doing well in IT/CT because they have the computing resources at their homes and have more opportunities to practice computing skills including try-and-error problem-solving at home, than those that come from poor communities. "The cultural capital is connected to community cultural wealth" that can be used to "enrich learning by establishing points of contact where knowledge from students' homes and communities can be brought in to support educational processes" (Lachney, 2017, p. 178).

In the review it was noted that students coming from the dominant class are highly advantaged compared to the students coming from subordinate classes. These students enter the education system with prior knowledge and are prepared to do well in their academic pursuits. The school is an institution that furthers or continues what they already know. On the contrary, for students from the lower status communities, the school environment is hostile and presents alien things to them (Goldthorpe, 2007). The dominant classes have accumulated and monopolized the resources available for their exclusive benefit, in addition to preserving their position of dominance against the subordinates. Curriculum planners and policymakers do not consider the cultural capital of a school, rather they are concerned about the sustainable productivity of the subject to the country (Dwivedi & Joshi, 2021). They are concerned about the value the subject will add, or how it prepares

citizens for their role in economic development. In addition, Ofori, Choongo, Kekop, Shah, Rochani & Telfair (2021) suggest that introducing IT/CS in high schools could result in a more “interactive learning environment’ among learners leading to enhancement of learning outcomes not only in IT/CS but also in other subjects.

CONCLUSIONS

There are relatively high correlations between principals' beliefs and perceptions that the inclusion of IT/CS is tied entirely to the cultural capital of a society. Social and cultural capital plays a pivotal role in providing teachers with a good computing foundation (Dlamini & Dewa, 2021). This may influence school principals to introduce IT/CS in their school curriculum. The result of this study shows that among the sample of South African principals there is a view that IT/CS can flourish in schools where there is good cultural capital. It is noted in the context of South Africa that IT/CS is offered by prestigious status schools that represent their cultural capital. It is easier to teach students from elite-status cultures, as they are familiar with the content taught at school. The schools appear to be extending the knowledge students have, unlike students who lack cultural capital (DiMaggio, 1982). Thus, these results concur with Bourdieu (1974, 1986) who viewed cultural capital in the context of dispositions, attitudes, preferences, and behaviours, that are learnt during the process of socialization. Schools are presented as the conservative force that maintains the community practice; thus it is not ideal for the schools that lack cultural capital to introduce IT/CS as they may face a challenge in preserving what is not practised at home or by the community. Bourdieu believed that possession of certain characteristics such as manner of speech or specific skills, reveals the social hierarchy of a person and where he is coming from. This occurs despite the educational background and the money he/she possesses (Huang and Liang, 2016). If the school fails to preserve such community attributes, the school authorities are deemed a failure, as they are failing children coming from homes that want to maintain such behaviour and knowledge. Thus, it can be concluded that cultural capital significantly relates to school culture and its attributes. More importantly, cultural knowledge and language are vital in cultural capital. The principals used their experience and cultural background to determine whether to include IT/CS in their school’s mainstream curriculum. Of importance among South African high school principals is the need to change their mind-set about seeing IT/CS as a subject that thrives better in high cultural capital schools. Rolle-Greenidge and Walcott (2020) noted that the successful implementation of technology depends on the attitude of the teachers and by extension it can be said that the introduction of IT/CS in the high school curriculum is dependent on principals’ positive attitudes.

RECOMMENDATION

School principals must play a key role in responding to the changes in technology and the advancements being made. They need to look beyond the socio-cultural capital of the ecosystem their schools are located in and champion new technologies that increase the quality of education (Tucker, 1996). They should harness the opportunities for students, regardless of their socio-cultural capital, and prepare them to participate in the development of technologies that ensure competencies that can guarantee their future citizenship. Meeting this challenge will require school principals to fundamentally change the way they are choosing the subjects that fit into their curriculum.

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