Effect of Christian Religious Studies Teachers' Knowledge of Human Development on their Teaching Practices. Influence of Demographic Characteristics.

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ABSTRACT

The study sought to find out the effect of CRS teachers' knowledge of human development on their knowledge of teaching practices. The influence of their academic qualifications, professional qualifications and teaching experiences on their knowledge of human development and teaching practices were sought. Through the cross-sectional survey design, quantitative data was collected from 23 CRS teachers and 400 students through a questionnaire. Census method was used to involve all teachers whiles the proportionate random sampling was used to select the students. Results from the study showed that CRS teachers have high knowledge of human development and teaching practices. Results of the factorial ANOVA portrayed that CRS teachers' academic qualifications, professional qualifications and teaching experiences do not simultaneously and individually significantly influence their knowledge of human development (F (16,3,) = 1.412, p = .352, partial η2 = .790) and teaching practices (F (16,3,) = 3.555, p = .063, partial η2 = .905). Simple linear regression results portrayed that teachers' knowledge of human development lowly explains 6% of the variance in knowledge of teaching practices (F (1, 21) =.109, p= .744, R =.297a, R^2= .055, R^2 $_{Adjusted}$ = .042) although the effect is not significant. It was recommended that GES should assign only qualified and professional teachers to teach CRS. The assignment of unqualified and non-professional teachers to teach the subject has been a major issue. Again, GES should collaborate with the NaCCA to organise periodic workshops for CRS teachers in the country irrespective of their qualifications and teaching experiences.

Keywords: Knowledge of Human development, Teaching practices, Academic qualification Professional qualification, Teaching experience.

INTRODUCTION

Teachers as the final implementers of the school curriculum gives indication that they are the most crucial factor when it comes to students' learning. Literature has established that teachers are the most influential school factor on student's learning and interest in a particular subject (Rockoff, 2004; Aaronson, Barrow, & Sander, 2007). This recognition puts teachers at the centre of the helm of affairs in the classroom and therefore wield some power. Teachers act as parents to pupils in the educational setting (they mentor, safeguard, and inspire the learners), and this has had a big impact on teaching and learning (Aziz & Quraishi, 2017). The success of the teaching and learning process greatly hinges on the authority teachers exert in the classroom (Pace, 2003). This authority enables the teacher to inspire and direct learners' knowledge acquisition, skills and change in behaviour. This would go a long way to indicate the attainment of the academic objectives related to the prescribed curriculum in the school (Rice, 2010). Christian Religious Studies (CRS), a subject taught at the secondary school level, relates bible events to the lives of students. The nature of the subject demands that the teacher must exercise authority in the subject in order to

effectively teach it, and ensure adequate improvements in the lives of students.

Teacher authority is a concept that has varied nomenclature ascribed to it by different scholars in education. These include; teacher authority (Pace & Hemmings, 2007; Tirri & Puolimatka, 2000), classroom authority (Oyler & Becker, 1997; Pace & Hemmings, 2007), authority in student-teacher relations (MacAllister, Macleod, & Pirrie, 2013), pedagogical authority (Harjunen, 2009, 2011), and legitimate teacher authority (Lai, Gu, & Hu, 2015). In this context, teacher authority is the power and influence that teachers possess over students in educational settings. The skilful utilization of teacher authority is instrumental in cultivating a positive and productive learning environment, where students are motivated, fully engaged, and empowered to reach their utmost potential. There are five types of teacher authority; expert authority, coercive authority, reward authority, reference authority and position (legitimate) authority (Pace & Hemmings, 2007). Teacher expert authority includes content knowledge, knowledge of human development, teaching practices and classroom organisation and management. These dimensions of expert authority positions the teacher as an expert in the subject, someone who has teacher craft and a great manager of the classroom. It is important to understand that these dimensions are not mutually exclusive. The teacher's authority in the knowledge he possesses in CRS and the necessary teaching skills cannot be overlooked. Vaaland (2016) remarked that a teacher cannot possibly succeed until he or she has a solid understanding of the subject area he or she is teaching and a decent general knowledge, no matter how nice, charming, and well intentioned the teacher may be. This forms the knowledge of human development and teaching practice.

Teachers' knowledge of human development is an essential dimension of teacher expert authority. Human Development is defined as the process of enlarging people's freedom and opportunities' improving their wellbeing. Human development is about the real freedom people have to decide who to be, what to do and how to live. This knowledge is derived from the teachers' awareness of the various developmental stages of humans, and how they relate to human behaviour (Guo, Connor, Yang, Roehrig, & Morrisson, 2012). In the classroom setting, teachers will encounter learners at various stages of development and will exhibit different characteristics, which have a direct link to their learning. The teacher should be able to understand these behaviours from the perspective of the developmental stages and device appropriate strategies to relate with them. This will enable to teacher guide the learners towards the attainment of the prescribed values, which will lead to the expected changes in behaviour and attitudes (Valli, 1992). The CRS teacher exhibiting his authority with the aim of developing the values of his students must inculcate developmental characteristics into his student. The teaching must be geared towards having these characteristics seen in his student there by helping in developing their human values. The CRS teacher in developing values in his learners must seek to direct the teaching towards encouraging his students to live and accept diverse ways of doing things and not being stacked at one thing (Njoku & Njoku, 2015). Teachers' knowledge of human development is very vital as it enables them direct students to become more responsible and more sensible in dealing with issues, understand perspectives of life in a better way, and develop strong relationships with family and friends. The CRS teacher as an authority holder over his students should endeavour to navigate his teaching towards development of his students.

Effective teaching is not necessarily a consequence of new policy. Lying at the heart of effective teaching are the knowledge of teaching practice and skills that a teacher brings to the cognitive demands of teaching (Graham, White, Cologon & Pianta, 2020). What teachers do in classrooms is very much dependent on what they know and believe about the subject they teach and on what they understand about the teaching and learning of their subjects (Anthony & Walshaw 2007). Successful teachers are those with both the intention and the effect to assist students to make sense their given topics (Jaworski 2004). A teacher with merely the intention of developing student understanding will not essentially yield the wanted outcome. What is clear, however, is that collections of sound content knowledge and pedagogical knowledge will provide the means to realize the good intention. Teachers' conceptual understanding and knowledge is critically important at

any level. It follows that when prospective teachers demonstrate limited or confused understanding of the subject knowledge relevant to the lesson, unless rectified; their future students will struggle to make sense of the relevant concepts. Teachers who are unclear in their own minds about particular ideas may struggle to teach those ideas and may resort to examples that prevent, rather than help, student development (Yusuf & Dada, 2016). Teachers' limited knowledge in practice may lead them to misunderstand their students' solutions and may lead them to give feedback that is inappropriate or unhelpful. In short, teachers' fragile knowledge of teaching practices often puts boundaries around the ways in which they might develop students' understandings (Donkoh, 2017). Teachers with sound knowledge of the various strategies for teaching CRS make good sense of ideas. They develop the flexibility for spotting opportunities that they can use for moving students' understandings forward. When teachers use their knowledge of teaching practices to enhance student learning, they are engaging in effective teaching practice. Not only are they advancing students' understandings, but they are also, ultimately, adding value to the wider community of individuals.

It is obvious from the above discussion of the literature that, teachers' knowledge of human development relates to their teaching practices (Rice, 2010). This means that, teachers' knowledge of how students develop through the various stages of human development would have an effect on the strategies they would employ to teach. Some previous studies (Shephard, Rogers & Brogt, 2020; Sousa, 2011; Seezink & Poell, 2011) have established this. The literature on teachers' knowledge of human development and teaching practices enumerates some critical factors that have been established to influence a teacher's knowledge. It is expected that a teacher who had gone through the prescribed and required teacher-training programme would have knowledge of the various developmental stages of learners as well as the appropriate strategies for teaching them. Several studies have looked at the influence of teachers' academic and professional qualifications on their knowledge of human development and teaching practices. On Academic qualification, whiles some (Aziz & Quraishi, 2017; Etuibon & Benson, 2014; Bamidele & Adekola, 2017; Casian, Mugo & Claire, 2021) found that it influences teachers' knowledge of human development and their teaching practices, others (Bonney, Amoah, Micah, Ahiamenyo & Lemaire, 2015) found that it does not influence teachers' knowledge on how learners develop and the appropriate teaching practices to employ. In terms of professional qualification influencing teachers' knowledge of human development and teaching practices, some previous studies (Etuibon & Benson, 2014; Bamidele & Adekola, 2017; Casian, Mugo & Claire, 2021; Mutanje, Khatete & Riechi, 2018) confirmed that it does influence whiles others (Aziz & Quraishi, 2017; Bonney, Amoah, Micah, Ahiamenyo & Lemaire, 2015) found no influence.

In addition, the literature on teachers' knowledge of human development and teaching practices is very loud on the influence of teaching experience (years) of teachers' knowledge of human development and teaching practices. Aziz and Quraishi (2017), Guo, Connor, Yang, Roehrig and Morrisson (2012), Rice (2010), Donkoh (2017), Etuibon and Benson (2014) and Yusuf and Dada (2016) have in their respective studies, cutting across the globe, established an influence of teachers' teaching experience on their knowledge of human development and teaching practices. These studies implied that knowledge of the various stages of students' development and the appropriate teaching strategies increase with increase in the years teachers teach. However, Graham, White, Cologon and Pianta, (2020) in their study found that differences in teaching experiences do not influence teaching practices of teachers.

Renderings from the above issues from the literature gives indication that teachers' knowledge of human development and knowledge of teaching practices are critical for the attainment of expected educational outcomes. It is important to note also that, these set of knowledge premised in teacher expert authority are influenced by some factors. The importance of knowledge of human development to the selection of appropriate teaching strategies have also been established. This implies that the success of teaching and learning depends on the teachers' knowledge of human development and teaching practices. The CRS teacher should possess these knowledge in order to succeed.

The teaching of CRS in Ghana is bedeviled with many issues. These issues range from teaching, learning,

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inclusivity, curriculum, interest of students and teacher knowledge. In recent times, focus has been on the lack of students' interest in the subject due to how it is taught by teachers (Mensah & Owusu, 2022). Narrowing down on teachers, Owusu and Mensah (2022) found that some of the teachers of CRS do not have the requisite (academic and professional) qualifications. This implies that they had not read methods of teaching CRS, which is for only those that major in religion hence they are not familiar with the appropriate methods used in handling the subject. This directly affects the learning development of their students. An observation from the New Juaben Municipality showed that some of the teachers of CRS do not have the required qualifications. Interactions with students of CRS in the senior high schools during our supervision of teaching revealed low interest in the subject due to the way their teachers teach the subject. Can this be because these teachers do not have knowledge of human development and teaching practices, which will enable them, select appropriate strategies to teach? Do they have the requisite qualifications and experiences? Literature on the teaching of CRS has indicated that students' interests and achievement in CRS has been hindered by some teacher related factors (Njoku & Njoku, 2015; Annobil, 2017).

Previous studies (Graham, White, Cologon, & Pianta, 2020; Aziz & Quraishi, 2017; Etuibon & Benson, 2014; Bamidele & Adekola, 2017; Casian, Mugo & Claire, 2021; Bonney, Amoah, Micah, Ahiamenyo & Lemaire, 2015; Mutanje, Khatete & Riechi, 2018; Guo, Connor, Yang, Roehrig & Morrisson, 2012; Rice, 2010; Donkoh, 2017;Yusuf & Dada, 2016) on teachers' knowledge of human development and teaching practices have focused on influence of academic qualification, professional qualification and teaching experience separately. None of them looked at their combined influence on teachers' knowledge of human development and teaching practices. These studies were conducted in Australia(Graham, White, Cologon, & Pianta, 2020), Pakistan(Aziz & Quraishi, 2017), United States of America(Guo, Connor, Yang, Roehrig & Morrisson, 2012; Rice, 2010), Kenya(Mutanje, Khatete & Riechi, 2018), Nigeria(Etuibon & Benson, 2014; Bamidele & Adekola, 2017; Yusuf & Dada, 2016), Rwanda(Casian, Mugo & Claire, 2021) and Ghana(Donkoh, 2017; Bonney, Amoah, Micah, Ahiamenyo & Lemaire, 2015) in various subject areas. However, none was conducted in CRS, to find out CRS teachers' knowledge of human development and teaching practices. In addition, none of the previous studies looked at the effect that CRS teacher's knowledge of human development would have on their teaching practices.

Based on these knowledge, context and population gaps in the literature, this study departs from previous studies because it focuses on determining the combined influence of CRS teachers' academic qualification, professional qualification and teaching experience on their knowledge of human development as well as knowledge of teaching practices. The study again looks at the effect of CRS teachers' knowledge of human development on their knowledge of teaching practices. In solving the identified problem, these gaps in literature will be filled by providing empirical evidence in the Ghanaian context, through the following research questions and hypotheses.

Research questions

1. What is the level of CRS teacher's knowledge of human development?
2. What is the level of CRS teachers' knowledge of teaching practices?

Hypotheses

H_0 1: There is no statistically significant difference in CRS teachers' knowledge of human development based on their academic qualifications, professional qualifications, and teaching experiences

H_0 2: There is no statistically significant difference in CRS teachers' knowledge of teaching practices based on their academic qualifications, professional qualifications, and teaching experiences

H_0 3: There is no statistically significant effect of CRS teachers' knowledge of human development on their

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knowledge of teaching practices

Conceptual Framework

The conceptual framework (Figure 1) for this study was derived from the literature review, the variables of interest explored in relation to the problem identified, research questions and hypothesis. These represent how the issues have been conceptualised in order to accomplish the task and purpose of the study. Previous studies discussed indicated the individual influences of academic qualification, professional qualifications and teaching experiences of teachers on their knowledge of human development and knowledge of teaching practices. Whiles some said they would, others said they would not. Based on that, it is hypothesised that academic qualification, professional qualifications and teaching experiences may or may not influence teachers' knowledge of human development and knowledge of teaching practices as seen in hypothesis 1 and 2. Literature also gave indication of the possible effect of teachers' knowledge of human development on their teaching practices. So, it is hypothesised that their knowledge of human development may or may not have an effect on their knowledge of teaching practices as seen in hypothesis 3.

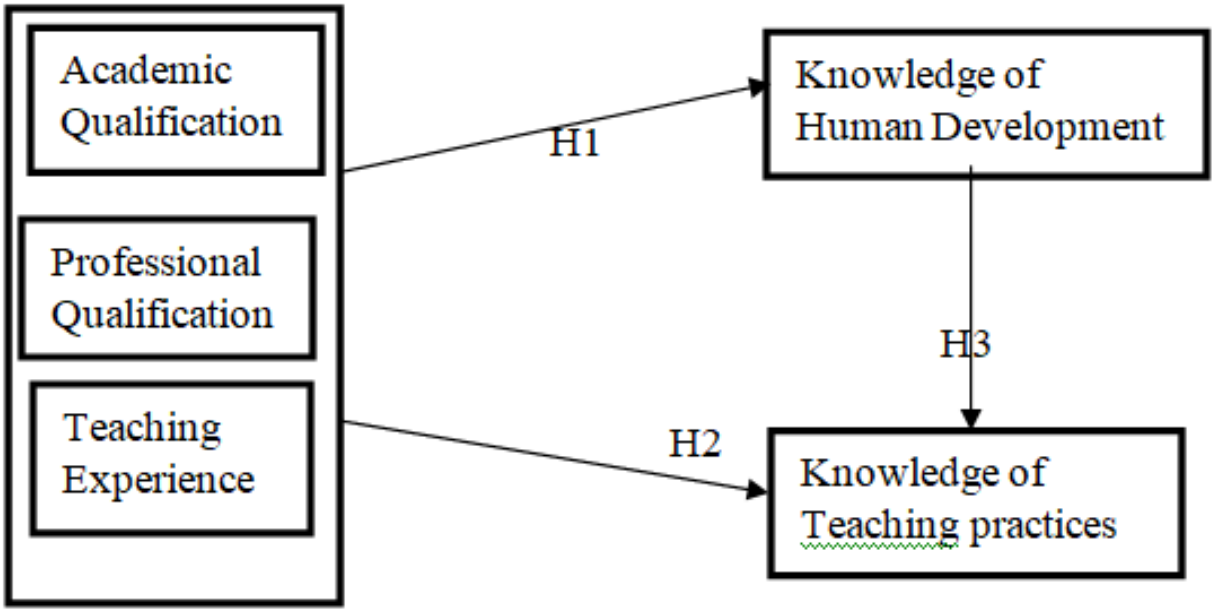

Figure 1: Conceptual Framework

METHODS

Procedures

This study hinged on the positivist paradigm and the quantitative approach to research to adopt the cross-sectional survey research design (Cohen, Manion & Morrison, 2018; Babbie, 2021). This enabled the collection of quantitative data from both CRS teachers and students to establish CRS teachers' knowledge of human development and teaching practices, determine if differences exist in their knowledge of human development and teaching practices based on their academic qualifications, professional qualifications and teaching experiences, as well as establish the effect of their knowledge of human development on their knowledge of teaching practices. All teachers of CRS and form 1 and 2 students of CRS in Senior high schools in New Juaben Municipality constituted the population for the study. There were 23 CRS teachers and 3,500 students in the eight schools. The teachers and the students formed the unit of analysis. The teachers were selected obviously because they teach the subject are in the best position to help establish their knowledge levels and also provide information on their academic qualifications, professional qualifications and teaching experiences. The students were selected because they have experienced their teachers teach CRS and will provide valuable data to triangulate the data from CRS teachers.

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Using the census method, all 23 CRS teachers were included in the study. Tracy (2013) indicated that the census method is most suitably to use when one deals with a defined population that is lesser. Also, out of the 3,500 CRS students, 400 were selected and involved in the study, using the proportionate simple random sampling procedure. Table 1 and 2 shows the characteristics of both CRS teachers and students involved in the study respectively.

Table 1: Demographic Characteristics of Teachers (n=23)

Variable	Sub Scale	No.	%
Gender	Male	14	61
	Female	9	39
Teaching experience (years)	1- 5 years	7	30
	6-10 years	3	13
	11-15 years	5	22
	16-20 years	8	35
Academic Qualifications	Bachelor's Degree	12	52
	Masters (without research)	8	35
	Masters (with research)	3	13
Professional Qualifications	Teachers' Certificate A	3	13
	Diploma in Education	6	26
	Post Graduate Diploma in Education.	3	13.2
	Bachelor of Education.	7	30.4
	Master of Education	4	17.4

Table 2: Demographic Characteristics of Students (n=400)

Variable	Sub Scale	No.	%
Gender	Male	120	30.0
	Female	280	70.0
Form (class)	Form One	200	50
	Form two	200	50

Ethical considerations are very crucial in research. Ethical clearance was sought from the Institutional Review Board of the University of Cape Coast to ensure that issues like informed consent, anonymity, confidentiality among others were taken into consideration and not violated. Permission was sought from the Municipal Directorate of Education and Headmasters of the schools in New Juaben Municipality. CRS teachers and students were made aware that the data collected was purely for academic purposes and that any information provided would be handled with respect.

Measures

Structured questionnaires were used to collect data from both CRS teachers and students to measure the level of CRS teachers' knowledge of teaching practices and human development. The instrument for CRS teachers had 48 closed ended items, which made up of two sections. Section A had 4 items which sought information on the demographic characteristics of the CRS teachers for the testing of hypotheses one and

two. Section B measured CRS teachers' knowledge of human development with 24 items. These items were crafted from the literature on what knowledge of human development entails. Section C consisted of 20 items and sought to measure CRS teachers' knowledge of teaching practice. These items were also developed from what constitutes teaching practices based on the literature. The questionnaire for CRS students had 34 items. Section A had 2 items that sought information on students' demographic characteristics. Section B measured teachers' knowledge of human development with 13 items. Section C had 19 items, which measured teachers' knowledge of teaching practices from responses of students. Teachers' knowledge of human development and teaching practices were both measured on a scale of 1-5 (1=Undecided; 2=Strongly Disagree; 3=Disagree; 4=Agree and 5=Strongly Agree).

Validity and reliability

To ensure validity of the instruments, expert judgements were used to establish face and content validity. Confirmatory factor analysis was performed. The factor loadings of knowledge of human development construct ranged from 0.565 to 0.843 for both teachers' and students' questionnaire. In addition, the loadings for knowledge of teaching practices ranged from 0.489 to 0.912 for both teachers' and students' questionnaire. This indicated evidence of convergent and construct validity (Hair et al., 2017; Vinzi et al., 2010). The test for internal consistency of both instruments after a pilot study in four schools in the Akuapim north and Akuapim south districts in the Eastern region showed that both instruments were reliable. The Cronbach's alpha values for teachers and students' questionnaire were determined as 0.74 and 0.78 respectively. These reliabilities were above the threshold of 0.7 (Hair et al., 2017; Henseler et al., 2009).

Data Analysis

The quantitative data collected from CRS teachers and students in the eight senior high schools in the New Juaben municipality were cleaned, coded and keyed in SPSS (v24) to help organise, and draw understanding from their responses. Demographic data was analysed with frequencies and percentages. Frequencies, percentages, means and standard deviations were used to analyse data on CRS teachers' knowledge of human development and knowledge of teaching practices. Factorial Analysis of Variance (ANOVA) was used to analyse the simultaneous and individual differences that have been hypothesised in hypothesis 1 and 2. Simple linear regression was used to analyse the effect of CRS teachers' knowledge of human development on their knowledge on teaching practices.

RESULTS

This section presents the results of the analysis of data. The results are presented in tables for all the research questions and hypotheses.

What is the level of CRS teacher's knowledge of human development?

The first objective of the study was to find out if CRS teachers possess knowledge of how humans develop. In this context, it was to find out if they have knowledge about physical changes in puberty, hormonal changes, levels of thinking, and cognitive development of adolescents. Students at the senior high school level fall within the adolescent stage of development. Data was collected from both CRS teachers and students. They were to respond to statements on human development on a Likert scale by indicating their agreement or disagreement. Teachers responded to measure their level of knowledge on human development. The students also responded to indicate their teachers' level of knowledge on human development. The data from students was collected for the purposes of triangulation. The scale for the statements were; 5= Strongly Agree, 4= Agree, 3=Disagree, 2= Strongly Disagree and 1 = Uncertain. The mean scores interval was interpreted as 1.00 – 1.9= Low, 2.0- 3.5 = Moderate and 3.6-5.0= High. Details of results of response from both CRS teachers and students are shown in Table 3 and 4 respectively.

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Table 3: CRS Teachers' Knowledge of Human Development (n=23)

Statements	SA/A	%	DA/SDA	%	U	%	M	SD
There are physical changes associated with puberty	23	100	0	0	0	0	4.57	0.51
These physical changes can cause distractions in class	21	91.3	2	8.7	0	0	4.26	0.62
Students can mature late and it has effects on their learning	20	86.9	2	8.7	1	4.3	4.00	0.85
Students can mature early and it has effects on their learning and understanding of issues in class	22	95.7	0	0	1	4.3	4.39	0.89
Changes in hormonal activities have effects on the behaviour of students in class	21	91.3	2	8.7	0	0	4.30	0.63
The adolescent stage of development has implications on thinking	21	91.3	1	4.3	1	4.3	4.17	0.89
Adolescents have different level of thinking	21	91.3	1	4.3	1	4.3	4.30	0.93
There is variation in the cognitive development of adolescents	22	95.7	1	4.3	0	0	4.30	0.56
Students take stands or perceptions on issues in and outside the classroom	22	94.6	1	4.3	0	0	4.17	0.49
Students are subject to changes in the perspectives they take	23	100	0	0	0	0	4.39	0.50
Parenting styles have influence on students' growth and learning	23	100	0	0	0	0	4.65	0.49
Parents of students use different parenting styles	23	100	0	0	0	0	4.74	0.45
Students go through different stages of identity development	23	100	0	0	0	0	4.48	0.51
Students are sometimes confused about their identity	19	82.6	3	13.0	1	4.0	4.09	0.95
Students get to the stage of independence during their development.	20	87	3	13	0	0	4.09	0.73
CRS teachers can help students to develop self-independence	21	91.3	2	8.6	0	0	4.27	0.75
Students form cliques and friendship groups in schools as part of their development	19	82.6	4	17.3	0	0	4.13	0.81
Students are particular about popularity when forming friendship groups	17	73.9	5	21.7	1	4.3	4.09	1.04
Students change their friends with time because of hormonal and social activities	21	91.3	1	4.3	1	4.3	4.22	0.90
Adolescents develop sexual behaviours	23	100	0	0	0	0	4.43	0.51
Students begin developing sexual desire and feelings	23	100	0	0	0	0	4.52	0.51
Students' behaviours are influenced by their sexual desires	21	91.3	1	4.3	1	4.3	4.09	0.95
Students have strong urge to date the opposite sex	23	100	0	0	0	0	4.39	0.50
Students develop strong urge to have sexual relationship	21	91.3	0	0	2	8.7	4.04	1.07
Average							**4.30**	**0.71**

Source: Field Data (2023)

Table 3 shows results of teachers' responses on their knowledge of human development. All (n= 23, 100%)

teachers either strongly agreed or agreed that there are physical changes associated with puberty (M= 4.57, SD= 0.51), that adolescents develop sexual behaviours (M= 4.43, SD= 0.51**),** that students begin developing sexual desire and feelings (M= 4.52, SD= 0.51) and students have strong urge to date the opposite sex (M= 4.39, SD=0.50). Again, 21(91%) agreed that the physical changes can cause distractions in class (M= 4.26, SD= 0.62), students can mature late and it has effects on their learning (20 (86.9%), M= 4.00, SD= 0.85), students can mature early and it has effects on their learning and understanding of issues in class (22 (96%), M= 4.39, SD= 0.89), changes in hormonal activities have effects on the behaviour of students in class (21 (91.3%), M= 4.30, SD= 0.63), whereas 21 (91.3%) agreed that the adolescent stage of development has implications on thinking (M= 4.17, SD=0.89). In addition, 21 (91%) agreed that students' behaviours are influenced by their sexual desires (M= 4.09, SD= 0.95). Finally, it was recorded that 21 (91%) agreed that students develop strong urge to have sexual relationship (M= 4.04, SD= 1.07). The overall mean score of 4.30(SD= 0.71) indicates that teachers have high level of knowledge of human development.

Table 4 shows results of students' responses on their teachers' level of knowledge of human development. Majority (n=289, 72%) agreed their teachers make them aware of the physical changes associated with puberty (M= 3.81, SD= 1.16). Again, 301 (75%) of the students agreed that their CRS teachers make them aware of adolescent stages of development which has implications on thinking (M= 3.79, SD= 1.19). In addition, majority (69%) agreed that their CRS teachers make them aware of the different levels of adolescents thinking (M= 3.72, SD= 1.15). Likewise, majority (n=308, 77%) agreed that their teachers encourage them to take stands on issues in and outside the classroom (M= 3.85**,** SD= 1.14**).** Again, majority (71%) agreed that their teachers encourage them to be subjective to changes in perspectives they take (M= 3.69, SD= 1.12). Some 235 (59%) strongly agreed or agreed that their teachers encourage them to form cliques and friendship groups in schools as part of their development (M= 3.46, SD= 1.24). In addition, it was revealed that 189 (47%) of the students disagreed their teachers encourage development of them sexual behaviours (M= 3.17, SD= 1.28). Majority 245 (61%) agreed that their teachers educate them on development of sexual desires and feelings (M= 3.50, SD= 1.33). Lastly, the results showed that 271 **(**68%) of the students agreed that their teachers educate them on sexual relationship of the opposite sex (M= 3.72, SD= 1.24). The average mean score for students' responses to their teachers' knowledge of human development was 3.65 (SD= 1.20). This indicates CRS teachers have a high level of knowledge on human development.

Put together, results from both CRS teachers and students indicate that, teachers have a high level of knowledge when it comes to human development, especially adolescent development. The findings from teachers' responses are corroborated by responses from the students.

Table 4: Students Response to CRS Teachers' Knowledge of Human Development (n=400)

Statements	SA/A		DA/SDA		U		M	SD
	No	%	No	%	No	%		
My teacher makes us aware of the physical changes associated with puberty	289	72	77	19	34	9	3.81	1.16
My teacher makes us aware of adolescent stages of development which has implications on thinking	301	75	59	15	40	10	3.79	1.19
My CRS teacher makes us aware on the different levels of adolescents thinking	278	69	86	23	36	9	3.72	1.15
My teacher encourages students to take stands on issues in and outside the classroom	308	77	61	15	31	8	3.85	1.14
My teacher encourages students to be subjective to changes in perspectives they take	283	71	78	20	39	9	3.69	1.12

My teacher makes students aware of the parenting styles which influence students' growth and learning	301	75	63	15	36	9	3.79	1.15
My teacher makes students aware of the different stages of identity development	318	80	42	10	40	10	3.79	1.14
My teacher is able to help students get to the stage of independence during their development	267	67	76	19	57	14	3.49	1.28
My teacher aids students to develop self-independence	264	66	103	26	33	8	3.62	1.15
My CRS teacher encourages students to form cliques and friendship groups in schools as part of our development	235	59	123	30	42	11	3.46	1.24
My teacher encourages development of student sexual behaviours	174	44	189	47	37	9	3.17	1.28
My teacher educates students on development of sexual desires and feelings	245	61	109	27	46	12	3.50	1.33
My teacher educates students on sexual relationship of the opposite sex	271	68	97	24	32	8	3.72	1.24
Average							**3.65**	**1.20**

Source: Field Data (2023)

What is the level of CRS teachers' knowledge of teaching practices?

Another objective of this study was to find out the level of knowledge CRS teachers possess in relation to teaching practices. Knowledge of teaching practices relate to pedagogical knowledge. Teaching practices of teachers have an impact on students' learning. Data was collected from both CRS teachers and students. They were to respond to statements teaching practices on a Likert scale by indicating their agreement or disagreement. Teachers responded to measure their level of knowledge on teaching practices. The students also responded to indicate their teachers' teaching practices. The data from students was collected for the purposes of triangulation. The scale for the statements were; 5= Strongly Agree, 4= Agree, 3=Disagree, 2= Strongly Disagree and 1 = Uncertain. The mean scores interval was interpreted as 1.00 – 1.9= Low, 2.0- 3.5 = Moderate and 3.6-5.0= High. Details of results of response from both CRS teachers and students are shown in Table 5 and 6 respectively.

Table 5: CRS Teachers' Knowledge of Teaching Practice (n=23)

Statements	SA/A		DA/SDA		U		M	SD
	No	**%**	**No**	**%**	**No**	**%**		
CRS teachers should explicitly state learning objectives for learners	22	96	0	0	1	4	4.26	0.86
CRS teachers should review previous lessons before they start new lessons	22	96	0	0	1	4	4.43	0.90
CRS teachers should consistently check students' exercise books	21	91.3	1	4.3	1	4.3	4.17	0.89
CRS teachers should review students' assignments and home works.	22	96	0	0	1	4.3	4.39	0.89
CRS teachers should interact with students through question and answer to check their understanding during lessons.	21	91.3	1	4.3	1	4.3	4.52	0.95

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CRS teachers should make student work in smaller groups and come up with joint solutions to a problem or task.	22	96	1	4.3	0	0	4.43	0.90
CRS teachers should allow students to do self-assignment	16	69.6	4	17.4	3	13.0	3.96	1.40
CRS teachers should allow students to participate in lesson planning	13	56.5	8	34.8	2	8.7	3.39	1.08
CRS teachers should group students according to their abilities	15	65.2	6	26.1	2	8.7	3.65	1.23
CRS teachers should encourage debates on topical issues	22	96	1	4.3	0	0	4.57	0.59
CRS teachers should task students to write argumentative essays	13	56.5	10	43.5	0	0	3.87	0.87
CRS teachers should engage students in projects that require at least one week to complete.	18	78.2	5	21.7	0	0	4.09	0.73
CRS teachers should communicate with students regularly in order to engage them.	18	78.2	4	17.4	1	4.3	4.00	0.95
CRS teachers should self-explain their communications with students to avoid miscommunication.	19	82.6	3	13.0	1	4.3	4.09	0.95
CRS teachers should make connections between content and their students' lives.	21	91.3	1	4.3	1	4.3	4.35	0.93
CRS teachers should provide individualized learning	17	74	3	13	3	13	3.83	1.30
CRS teachers should tailor resources and support for individual students	16	70	4	17	3	13.0	3.96	1.40
CRS teachers should use different practices based on students' needs.	22	96	1	4	0	0	4.57	0.59
CRS teachers should use multiple forms of assignments to articulate students' progress	22	96	1	4	0	0	4.43	0.59
CRS teachers should use multiple teaching strategies to introduce and teach the content of CRS.	22	96	1	4	0	0	4.57	0.59
Average							**4.18**	**0.93**

Source: Field Data (2023)

Table 5 shows results of teachers' responses on their knowledge of teaching practices. Almost all of the teachers (n=22, 96 %) either strongly agreed or agreed that they should use different practices based on students' needs (M= 4.57, SD= 0.59) and that they should use multiple teaching strategies to introduce and teach the content of CRS (M=4.57, SD=0.59). Out of 23, 21 of the teachers either strongly agreed or agreed that they should interact with their students through questions and answers to check understanding (M=4.52, SD=0.95). Majority (22, 96%) of the teachers either strongly agreed or agreed that they should make students work in smaller groups (M=4.43, SD=0.90), that they should use multiple forms of assignment to articulate students' progress (M=4.43, SD=0.59), and that should review previous lessons before they start new lessons (M=4.43, SD=0.90). The statement with the lowest number of agreements was on teachers allowing students to participate in their lesson planning which had 13 teachers either strongly agreeing or agreeing (M=3.39, SD=1.08). An average mean 4.18 (SD=.93) indicates that CRS teachers' have high knowledge of teaching practices.

Table 6 shows students' responses on their CRS teachers' knowledge of teaching practices. Majority (327, 82%) of the students agreed that their teachers explicitly state learning objectives for lessons (M= 3.98, SD= 1.03). Again, majority (n= 374, 94%) of the students agreed that their teachers review previous lessons

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before the start of new lesson (M=4.47, SD= .82). It was discovered again that 356 (69%) agreed that their teachers constantly check their exercise books (M= 3.80, SD= 1.1). In addition, 300 (75%) agreed that their teachers review their assignment and home works (M= 3.87, SD= 1.10).

Table 6: Students response to CRS teachers' knowledge of teaching practice (n=400)

Statements	SA/A		DA/SDA		U		M	SD
	No	%	No	%	No	%		
My teacher explicitly states learning objectives for lessons	327	82	49	12	24	6	3.98	1.03
My teacher reviews previous lessons before the start of new lesson	374	94	17	4	9	2	4.47	.82
My teacher constantly checks students exercise books	356	69	93	26	21	5	3.80	1.13
My teacher reviews student's assignment and home works	300	75	74	19	26	6	3.87	1.10
My teacher interacts with students through questions and answer to check our understanding during lessons	387	96	7	2	6	2	4.55	.68
My teacher allows us to form small groups to come up with joint solutions to a problem or task	362	90	28	7	10	3	4.41	.86
My teacher allows students to do self-assessment	306	77	70	18	24	6	3.95	1.08
My teacher allows students to participate in lesson planning	239	60	118	30	43	10	3.52	1.25
My teacher groups us according to our abilities	127	32	235	59	38	9	2.98	1.17
My CRS teacher encourages debates on topical issues	192	48	150	40	48	12	3.23	1.26
My teacher encourages students to write argumentative essays	107	27	257	65	36	9	2.95	1.08
My teacher encourages students on project works	318	80	68	17	14	3	3.99	1.02
My CRS teacher communicate with students in order to engage them	369	92	19	5	12	3	4.32	.84
My teacher helps students to make connections between content taught and students' lives	340	85	27	7	33	8	4.08	1.13
My teacher provides individualized learning	239	60	110	27	51	13	3.48	1.29
My teacher tailors resources and support for individual students	114	51	123	30	75	19	3.21	1.42
My teacher uses different practices based on students' needs	302	75	59	15	39	10	3.83	1.20
My teacher uses different forms of assessment to help evaluates students' progress	327	82	46	11	27	7	4.09	1.10
My teacher uses multiple teaching strategies to introduce and teach content of CRS	337	84	36	9	27	7	4.10	1.06
Average							**3.83**	**1.08**

Source: Field Data (2023)

However, almost all (n= 387, 96%) either strongly agreed or agreed that their teachers interact with them through questions and answer to check our understanding during lessons (M= 4.55, SD=.68). Majority 369 (92%) agreed that their CRS teacher communicate with them in order to engage them (M=4.32, SD=.84). It was revealed again that 302 (75%) students agreed that their teachers use different practices based on their needs (M=3.83, SD= 1.20). Furthermore, it was recorded that 327 (82%) CRS students agreed that their teachers use different forms of assessment to help evaluates students' progress (M=4.09, SD= 1.104). Lastly, 337 (84%) students agreed that their teachers use multiple teaching strategies to introduce and teach content of CRS (M=4.10, SD= 1.06). An overall average mean score of 3.83 (SD= 1.08) was obtained from

the students' responses indicating that teachers have high knowledge of teaching practices.

Put together, the results from both CRS teachers and students indicate that, teachers have a high level of knowledge of teaching practices related to the teaching of senior high school students. The responses of teachers' were affirmed by responses from the students.

There is no statistically significant difference in CRS teachers' knowledge of human development based on their academic qualifications, professional qualifications, and teaching experiences

Another objective of this study was to find out the influence of teachers' academic qualifications, professional qualification and teaching experiences on their knowledge of human development. Literature has established the importance of teachers having knowledge of how students (learners) develop in order to guide them. It is espoused in literature that academic qualifications, professional qualification and teaching experiences have an influence on their knowledge of human development. It was hypothesised that differences may exist in teachers' knowledge of human development (dependent variable) based on their academic qualifications, professional qualification and teaching experiences (independent variables). A three-way factorial ANOVA was conducted to examine the differences in order to test the hypothesis. The results of the analysis are in Table 7.

Table 7: Test of Between Subjects Effects on CRS Teachers' Knowledge of Human Development

Source	df	F	Sig.	Par. Eta^2
Corrected Model	16	1.412	.352	.790
Intercept	1	3594.201	.000	.998
Teaching experience	3	.864	.509	.302
Academic qualification	2	.169	.848	.053
Professional Qualification	5	1.610	.288	.573
Teaching experience * Academic qualification	1	.108	.754	.018
Teaching experience * Professional Qualification	1	4.518	.078	.430

The results of the General Linear Model (GLM) corrected model showed no statistically significant influence of CRS teachers' academic qualifications, professional qualifications and teaching experiences on their knowledge of human development, F (16,3,) = 1.412, p = .352, partial η2 = .790. There were no statistically significant interactions between teaching experience and academic qualification F (1, 3) = .108, p = .754, partial η2 = .018 and professional qualification and academic qualification F (1, 3) = 4.518, p = .078, partial η2 = .430. The results indicate that there was no statistically significant influence of teaching experience F (3, 3) = .864, p = .509, partial η2 = .302, professional qualification F (2, 3) = .108, p = .169, partial η2 = .848, and academic qualification F (5, 3) = 1.610, p = .288, partial η2 = .573 on CRS teachers' knowledge of human development.

There is no statistically significant difference in CRS teachers' knowledge of teaching practices based on their academic qualifications, professional qualifications, and teaching experiences

Again, this study sought to find out the influence of teachers' academic qualifications, professional qualification and teaching experiences on their knowledge of teaching practices. Literature has established the importance of teachers having knowledge of the appropriate practices to employ when engaging students in the classroom. It is espoused in literature that academic qualifications, professional qualification and teaching experiences have an influence on their knowledge of teaching practices (pedagogies). It was

hypothesised that differences may exist in teachers' knowledge of teaching practices (dependent variable) based on their academic qualifications, professional qualification and teaching experiences (independent variables). A three-way factorial ANOVA was conducted to examine the differences in order to test the hypothesis. The results of the analysis are in Table 8

Table 8: Test of Between Subjects Effects for CRS Teachers Content Knowledge

Source	df	F	Sig.	Par. Eta^2
Corrected Model	16	3.555	.063	.905
Intercept	1	2454.81	.000	.998
Teaching Experience	3	4.321	.060	.684
Professional Qualification	2	.570	.594	.160
Academic Qualification	5	1.918	.225	.615
Teaching Experience * Professional Qualification	1	.567	.480	.086
Teaching Experience * Academic Qualification	1	15.521	.008*	.721

The results of the General Linear Model (GLM) corrected model showed no statistically significant influence of CRS teachers' academic qualifications, professional qualification and teaching experiences on their knowledge of teaching practice, F (16,3,) = 3.555, p = .063, partial η2 = .905. There was statistically significant interaction between teaching experience and academic qualification F (1, 3) = 15.521, p = .008, partial η2 = .721. The results indicate that there was no statistically significant effect for teaching experience F (3, 3) = 4.321, p = .060, partial η2 = .684, professional qualification F (2, 3) = .570, p = .594, partial η2 = .160, and academic qualification F (5, 3) = 1.918, p = .225, partial η2 = .615 on CRS teachers' knowledge of teaching practices.

There is no statistically significant effect of CRS teachers' knowledge of human development on their knowledge of teaching practices

The final objective of the study sought to find out if CRS teachers' knowledge of human development (predictor variable) has a relationship or effect on their (knowledge) of teaching practices (outcome variable). The literature has an assumption that teachers with high levels of knowledge on human development will tend to employ appropriate teaching strategies that will suit the capabilities and abilities of their students. This will enable teachers to adopt age or stage specific pedagogies when engaging students. It was therefore was therefore hypothesised that CRS teachers' knowledge of human development has the propensity of affecting their (knowledge) of teaching practices. A simple linear regression analysis was conducted to find out if CRS teachers' knowledge of human development predicted their (knowledge) of teaching practices. Results from the analysis, using the enter method showed that the teachers' knowledge of human development (predictor variable) lowly explains 6% of the variance in (knowledge) of teaching practices, F (1, 21) =.109, p= .744, R =.297a, R^2= .055, R^2_{Adjusted} = .042. Table 9 shows the results of the analysis.

Table 9: ANOVA and Model Summary for Teachers' knowledge of human development in their Teaching Practice

Variable	DF	Mean Square	F	Sig	R	R^2	R^2 Adj.
Regression	1	6.300	.109	.744 b	.072 a	.055	.042

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Residual	21	57.568					
Total	22	63.868					

Results from the analysis further indicated that teachers' knowledge of human development (β = .072, t = .331, p = .744) is not significant in predicting their (knowledge) of teaching practices as shown in Table 10. Therefore, the null hypothesis cannot be rejected. This implies that as teachers abreast themselves with information on human development their teaching practices become perfect as they can meet individual learner's needs and aspirations.

Table 10: Regression Coefficients of Teachers' knowledge of human development on their Teaching Practice

Variable	B	SE	Beta	T	P	95% CL
Constant	94.731	11.959		7.921	.000	(69.860, 119.602)
Teaching Practice	.047	.142	.072	.331	.744	(-.248, .342)

The results show that knowledge of human development is not a significant predicator of teachers' knowledge of teaching practices. This implies that regardless of the level of knowledge of human development, it does not influence CRS teachers' knowledge of teaching practices.

DISCUSSION

The study aimed at finding out the influence of CRS teachers' academic qualifications, professional qualifications and teaching experiences on their knowledge of human development and teaching practices. The objectives of the study were to find out: the level of CRS teachers' knowledge of human development; their level of knowledge of teaching practices; the influence of their academic qualifications, professional qualifications and teaching experiences on their knowledge of human development; the influence of their academic qualifications, professional qualifications and teaching experiences on their knowledge of teaching practices; and the effect of their knowledge of human development on their knowledge of teaching practices. To this end, two research questions and three hypothesis were formulated to guide the study.

Findings from the study indicated that CRS teachers have high level of knowledge when it comes to human development, especially adolescent development. Results from the analysis of responses from both teachers and students showed that they agreed to the statements (all positive) that were used to measure teachers' knowledge of human development. The mean interpretations was 1.00 – 1.9= Low, 2.0- 3.5 = Moderate and 3.6-5.0= High. The average means were 4.30 and 3.65 from teachers and students responses respectively. This finding is not surprising as all the teachers indicated that they have had some professional training (see Table 1). These professional teacher education programmes offered at the Colleges of Education and Universities of Education in Ghana expose student teachers to psychological theories on human development. This finding is significant as it confirms the findings of Aziz and Quraishi (2017), Casian, Mugo and Claire (2021), Bonney, Amoah, Micah, Ahiamenyo and Lemaire (2015), and Mutanje, Khatete and Riechi (2018) who found that teachers in Lahore, Rwanda, Ghana, and Kenya respectively, have high levels of knowledge on human development.

The study also revealed from the descriptive analysis of responses from CRS teachers and students that, CRS teachers have high levels of knowledge of teaching practices. This means that the teachers have knowledge about the appropriate pedagogies to employ. Results from the analysis of responses from both teachers and students showed that they agreed to the statements (all positive) that were used to measure

teachers' knowledge of teaching practices. The mean interpretations was 1.00 – 1.9= Low, 2.0- 3.5 = Moderate and 3.6-5.0= High. The average means were 4.18 and 3.83 from teachers and students responses respectively. As intimated already, this finding is not surprising as all the teachers indicated that they have had some professional training (see Table 1). These professional teacher education programmes offered at the Colleges of Education and Universities of Education in Ghana exposes student teachers to pedagogical courses related to their subjects. This ensures that student teacher are not only equipped with the skills of teaching, but also the concepts about pedagogical practices. This finding situates well with literature. Graham, White, Cologon and Pianta (2020) discovered in their study in Australia that teachers have adequate knowledge of the appropriate strategies for teaching. Both Guo, Connor, Yang, Roehrig and Morrisson (2012) and Rice (2010) who conducted their studies in the USA, found that elementary and college teachers have adequate knowledge on how to teach. Similar studies (Pace & Hammings, 2007; Esmaeili, Mohamadrezai, & Mohamadrezai, 2015) found that teachers are well grounded in the teaching practices. Etuibon and Benson (2014) and Donkoh (2017) who focused on Chemistry teachers in Nigeria and Integrated Science teachers in Ghana, both found that the teachers have high levels of knowledge of teaching practices.

Furthermore, the study revealed CRS teachers' academic qualifications, professional qualifications and teaching experiences combined, do not cause any differences in their knowledge of human development. It was further revealed that individually, their academic qualifications, professional qualifications and teaching experiences did not influence differences in their knowledge of human development. This means that the knowledge of teachers with Bachelor's degree on how humans develop is at the same level as that of the teacher with a Master's degree. The knowledge of teachers with a Diploma in Education on how humans develop is the same as those with Bachelor of Education degrees. Knowledge on human development of teachers who have taught CRS between 1-5 years is not different from those that have taught between 16-20 years. This finding somehow defies (not entirely) the conceptualizations and assumptions from the literature, which led to the formulation of the hypothesis. It is expected that a teacher who has higher degrees, professional exposure and more experiences in teaching will have higher level of knowledge than those with less. However, with reference to discovered high level of knowledge on human development, it is not surprising. This finding confirms that of Bonney, Amoah, Micah, Ahiamenyo and Lemaire (2015) who found that academic and professional qualifications of teachers in Takoradi do not reflect on their knowledge of developmental stages of learners. However, others (Aziz & Quraishi, 2017; Etuibon & Benson, 2014; Bamidele & Adekola, 2017; Casian, Mugo & Claire, 2021) found that it influences teachers' knowledge of human development. Whiles it confirms findings of some studies (Aziz & Quraishi, 2017; Bonney, Amoah, Micah, Ahiamenyo & Lemaire, 2015) that professional qualifications do not influence teachers' knowledge of human development, it departs from others (Etuibon & Benson, 2014; Bamidele & Adekola, 2017; Casian, Mugo & Claire, 2021; Mutanje, Khatete & Riechi, 2018). Graham, White, Cologon and Pianta's (2020) study found no differences in teachers' knowledge of human whiles that of Aziz and Quraishi (2017), Guo, Connor, Yang, Roehrig and Morrisson (2012), Rice (2010), Donkoh (2017), Etuibon and Benson (2014) and Yusuf and Dada (2016) did.

The study further revealed that, CRS teachers' academic qualifications, professional qualifications and teaching experiences combined, do not cause any differences in their knowledge of teaching practices. In addition, it showed that individually, their academic qualifications, professional qualifications and teaching experiences did not influence differences in their knowledge of teaching practices. This indicates that, the knowledge of teachers with Bachelor's degree on appropriate teaching strategies is at the same level as that of the teacher with a Master's degree. The knowledge of teachers with a Bachelor of Education degree on teaching practices is the same as those with Post Graduate Diploma in Education. Knowledge of teaching practices of teachers who have taught CRS between 6-10 years is not different from those that have taught between 11-15 years. Meanwhile, teachers with varied academic qualifications, professional qualifications and teaching experiences are expected to have different levels of understanding of teaching practices. This,

from the literature was the basis for the conceptualization and formulation of the hypothesis. The finding of the current study both confirms and contradicts findings of previous studies. This finding confirms that of Bonney, Amoah, Micah, Ahiamenyo and Lemaire (2015) who found that academic and professional qualifications of teachers in Takoradi do not reflect on their quality of teaching. Meanwhile, it contradicts other studies (Aziz & Quraishi, 2017; Etuibon & Benson, 2014; Bamidele & Adekola, 2017; Casian, Mugo & Claire, 2021). The finding is not in harmony studies (Etuibon & Benson, 2014; Bamidele & Adekola, 2017; Casian, Mugo & Claire, 2021; Mutanje, Khatete & Riechi, 2018) that revealed that teacher professional qualifications and development improve the teacher's skills, knowledge, expertise and other characteristics needed to empower the student. Some studies (Aziz & Quraishi, 2017; Guo, Connor, Yang, Roehrig &, Morrisson, 2012; Rice, 2010) found an influence of teaching experiences on teaching practices while Graham, White, Cologon and Pianta's (2020) did not.

Finally, the study showed that CRS teachers' knowledge of human development positively had an effect on their knowledge of teaching practices. This implies that an increase in CRS teachers' knowledge of human development will lead to a corresponding increase in their knowledge of teaching practices. Again, it implies that teachers' knowledge of students' characteristics at various developmental stages is critical for the selection of appropriate teaching strategies. CRS teachers' knowledge of the various psychological theories related to human development has an effect on the way they teach their students, employing appropriate strategies to help students develop the values attitudes expected. Even though teachers' knowledge of human development lowly explains 6% of their teaching practices, it is still imperative for teachers to gain insight into human developmental stages before they can engage students. It also gives indication that other factors should be considered in determining factors that explain their teaching practices. Most studies on teachers' knowledge of human development and teaching practices (Etuibon & Benson, 2014; Bamidele & Adekola, 2017; Casian, Mugo & Claire, 2021; Mutanje, Khatete & Riechi, 2018; Aziz & Quraishi, 2017; Guo, Connor, Yang, Roehrig &, Morrisson, 2012; Rice, 2010) considered them separately and did not establish how they associate. Just a few studies (Shephard, Rogers & Brogt, 2020; Sousa, 2011; Seezink & Poell, 2011) focused on the effect of knowledge of human development on knowledge teaching practices of teachers. However, these were conducted outside Africa and on teachers in other subjects. This finding is therefore novel in the Ghanaian and African context.

CONCLUSIONS AND RECOMMENDATIONS

CRS teachers are able to select appropriate strategies for teaching that relate to their students' stages of development. This implies that their teaching is learner-centred. In addition, it can be concluded that CRS teachers deliver their content with ease and confidence since they have high knowledge of teaching practices related to CRS. This means students are guided and taught in line with their developmental needs since teachers are able relate their teaching practices with development of learners. This again implies that students' lack of interest and poor performances cannot be attributed to teachers' teaching practices. In addition, it can be concluded that CRS teachers have gained enough knowledge of human development and teaching practices irrespective of their academic qualifications, professional qualifications and teaching experiences. Therefore, their academic qualifications, professional qualifications and teaching experiences do not determine their knowledge of human development and teaching practices. Finally, it can be concluded that CRS teachers will be able to employ appropriate teaching strategies if they have knowledge of the developmental stages of students, and how they behave at each stage. However, their knowledge of the developmental stages of students is not the sole determinant of their teaching practices.

The finding of the study draw attention to the need for the assignment of qualified and professional teachers to teach CRS. The assignment of unqualified and non-professional teachers to teach the subject has been a major issue. The high level of knowledge in human development and teaching practices is attributed to the fact that the teachers in this study were qualified and professionals. It is again recommended that the Ghana

Education Service should collaborate with the National Council for Curriculum and Assessment (NaCCA) to organise periodic workshops for CRS teachers in the country irrespective of their qualifications and teaching experiences, to keep them abreast with issues on how students develop at the various stages of human development. Regardless of their previous teaching experience or official qualifications, teachers can enhance their understanding of human development through focused and targeted training. This can involve taking part in self-directed learning activities linked to human development as well as attending conferences, seminars, and webinars. Educating educators on the most recent findings and developments in the subject helps improve their comprehension and implementation of human development concepts in the classroom. This will make it easier for teachers to adjust their methods of instruction to the varying speeds at which pupils advance. Since CRS teachers' knowledge of teaching practices are not solely determined by their knowledge of human development, it is recommended that future studies target other key variables that may. This will provide further empirical evidence in establishing determinants of CRS teachers' knowledge of teaching practices for policy and curriculum decisions.

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Conflict of interest

The authors declare that they have no conflict of interest.

Data availability

Data are available on request.

Limitations

This study was purely quantitative in nature and thus, employed quantitative instruments to collect data and applied quantitative analysis. The use of closed-ended items limited the responses the participants gave. Observation and interview data would have given insight into how the teachers practice and apply their knowledge in the classroom and that would have enriched the study. This implies that a mixed method approach that utilizes both quantitative and qualitative data could be employed to give a broader perspective.

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