International Journal of Developmental Issues in Education & Humanities
Bilingual Journal of the Faculty of Education, University of Buea
Volume 1, Issue 1 November–December 2025, pp. 23-39
DOI: https://doi.org/10.5281/zenodo.17639400

METACOGNITIVE SKILLS OF CHILDREN (7-12 YEARS) IN THE MAMFE CENTRAL SUB-DIVISION, CAMEROON

Kelly Tabe Takang*
ORCID: 0000-0002-7830-0092
Department of Educational Psychology, University of Buea, Cameroon.

Abstract

Metacognition is the capacity to reflect on one's thoughts and behaviours. It plays a crucial role in self-control, self-instruction, memory, and problem-solving. Flavell (1979) and Piaget stated that young children are quite limited in their metacognition. They do little monitoring of their cognitive endeavours. However, recent studies show children display metacognition as early as three years old. These findings broaden our understanding of early metacognitive development. Still, significant gaps remain in the literature about how children in late childhood (aged 7-12 years), especially in African contexts, show metacognitive skills in daily activities. Few existing studies provide detailed accounts of how these older children express planning, monitoring, and evaluation in real-world contexts such as household chores. This study addresses this gap by investigating metacognitive skills during late childhood (7-12 years) and their relationship with gender among children in the Manyu Division. Quantitative data were collected from 250 children. Children reflected on their engagement in household chores, and their skill levels in planning, monitoring, and evaluation were assessed through structured interviews. The Spearman rank correlation and Mann-Whitney U test were used to test the hypotheses. Results revealed that age positively correlated with metacognitive skills in planning and evaluation, but not monitoring. There was no significant difference between boys and girls. Parental criticism had a strong influence on children's monitoring skills. Metacognition was supported by guidance from both parents and teachers. Teaching models should prompt ongoing task monitoring with continuous support to foster critical self-evaluation and adjustment.

Keywords:

Metacognition, planning skills, monitoring skills, evaluation skills, late childhood, gender

* Email: takang.kelly@ubuea.cm/ takang.kelly@gmail.com

Background

Vukman (2012) posits that metacognition is a part of higher mental processes. It empowers us to control and plan our mental activities or learning processes. Most definitions of metacognition focus on monitoring, self-regulation, planning, knowledge, and experience. Flavell (1979) states that metacognition is knowledge about the regulation of one's cognitive activities in learning. The primary constructs are knowledge of cognition and regulation of cognition. This includes control of our thought processes. According to Flavell, "metacognitive knowledge" refers to the portion of a child's or adult's stored knowledge about various cognitive tasks, goals, and experiences.

Research has consistently shown that metacognitive processes are closely linked to learning, memory, and academic performance in school-aged children (Roebers et al., 2021). Metacognitive knowledge develops as early as age three and continues beyond adolescence. This growth continues as long as educational processes challenge the learner (Veenman, Hout-Wolters, & Afflerbach, 2006). Learners acquire this knowledge unconsciously by observing and imitating at any age. They may also gain it consciously by listening to teachers, parents, or peers who advise them about learning (Wenden, 1999). Metacognitive control and regulation are used in real learning situations. Actual and conscious regulation of the learning process occurs through planning, monitoring, and meta-strategic activities (Stephanou & Mpiontini, 2017). This is the implementation of metacognitive knowledge in self-regulated learning (Flavell, 1979; Schneider & Artelt, 2010).

According to Schraw and Moshman (1995), planning involves selecting appropriate strategies and allocating resources that affect performance. For example, one must determine how to start a learning process, what to consider, and what outcomes to expect. Monitoring refers to being aware of comprehension and task execution. It is the ability to engage in periodic self-testing. Schraw and Moshman (1995) note that the ability to monitor one's own thinking develops slowly. It is often weak in both children and adults (Glenberg, Sanocki, Epstein, & Morris, 1987; Pressley & Ghatala, 1990). Evaluation refers to appraising the products of learning. It is the regulatory process of reviewing one's goals and conclusions.

Flavell (1979) demonstrated that young children exhibit limited knowledge and cognition regarding cognitive phenomena, specifically in their metacognition. He added that children do moderately little monitoring of their memory and other cognitive functions. The work of Piaget has shown that children in late childhood (ages 7-12) are incapable of higher-order thinking. Formal and abstract thinking begins at adolescence. This means that abstract thinking before adolescence may not be possible, or is very limited. However, socio-cultural theorists such as Vygotsky (1978) and Dasen (2011) have acknowledged the impact of the cultural environment on cognitive development. The environment can delay or hasten a child's developmental pattern. The position of the socio-cultural theorist is important for understanding development across cultures. This approach highlights the need to study behaviour and thinking in context, while also considering universal thoughts.

Theories of development have mostly been based on findings from non-African contexts. Nsamenang (2005) stated that if development thinking and action in Africa remain fixated on Eurocentrism, development will continue to elude Africa. Therefore, it becomes essential to study African children in their traditional contexts and styles to understand their developmental pathways.

The late childhood stage usually spans from 7 to around 12 years old. It matches Jean Piaget's concrete operational stage of cognitive development. Tchombe (2011) stated that late childhood spans from 6 to 12 years. This transition is crucial. At this stage, it is vital to pass on cultural knowledge and skills. This ensures that traditions remain sustainable and continuous. During this time, enrichment strategies become more sophisticated as children face greater demands. The environment enhances cognition by exposing children to a variety of stimuli. Influences include parents, peers, community members, and the broader environment. For instance, the Ngomi tribe in Malawi, as mentioned in Cole & Cole (2001), views late childhood as a time for children to begin acting independently. This occurs through self-regulatory behaviour. As cited in Cole and Cole (2001), Barker and Wright (1955) found that, in late childhood, children spend more time unsupervised by adults.

Nsamenang (2005) suggests that children require a diverse range of physical, social, and psychological stimuli to establish a strong foundation for life. This foundation helps them understand the value of these experiences later. Children encounter different developmental experiences and parental cultural models across cultures. These factors shape how well they develop. In African contexts, children interact through play and by serving parents and community members. Engaging in errands and household chores encourages creativity and promotes cognitive development. Children care for younger siblings and help with household chores. These actions reflect principles of sharing family responsibility (Serpell, 1993). They also help children learn the caretaker role early on (Nsamanang, 1992). These daily activities can be vital for developing metacognitive skills.

As children's active involvement in family activities begins very early (Tchombe, 2011), so do metacognitive skills in most African contexts. These skills begin to develop from early to late childhood. According to a study among the Bameleke of the West Region of Cameroon, Tchombe (2011) found that the underlying principle in their interest-driven cognitive enrichment strategy is learning. Learning applies to the child's everyday life as they interact with others. This helps them understand and solve real-life problems. The child is at the centre of the learning process, emphasising a child-centred principle. Nsamenang (2011) posits that children's development and learning can be understood only in the light of their cultural practices and livelihood circumstances.

Most studies have shown three main modes for developing metacognition: social interaction and transmission, experience through action, and maturation (Aurah, Koloi-Kealkitse, Isaacs & Finch, 2011; Case & Gunstone, 2002; Bryce & Whitebread, 2012; DeLuca & Nasim, 2013; Goos, Galbraith, & Renshaw, 2002; Henter & Indreica, 2014; Jacobs, 2004; Larkin, 2006; Leutwyler, 2009; Vauras & Annevirta, 2006; Vukman, 2005; Vukman, 2012).

These modes show that both nature and nurture play a significant role in metacognitive development. Vukman (2012) studied developmental changes in various reasoning domains and metacognitive precision. The study involved 282 participants from four age groups: 13-15, 23-25, 33-35, and 43-45 years. Participants solved tasks related to spatial, verbal-propositional, and social reasoning. The accuracy of self-evaluation increased with age. Males were more accurate in their self-evaluations than females. The improvement of metacognitive skills with age suggests that people become more reflective and self-aware as they age.

Leutwyler (2009) conducted a study to investigate the development of students' self-reported use of metacognitive learning strategies during high school. The study analyses the differential development patterns of 1,432 students between grades 10 and 12, in a longitudinal sample. The results suggest that, from a global perspective, there is no development of students' self-reported use of metacognitive learning strategies during high school — the expected gender-specific differences in favour of female students replicated in this sample. However, the self-reported use of monitoring and evaluation strategies tends to converge between genders during high school. In contrast, the differences in the self-reported use of planning strategies remain stable.

Problem

Extensive studies have been conducted on the development of metacognition in the formal education setting as children engage in problem-solving activities and cooperative learning situations. Most of these studies have shown that problem-solving activities and cooperative learning situations improve metacognition. Age is also an essential factor in the development of metacognition. However, there is limited work specifying how children during late childhood (7-12 years) and of different genders (boys and girls) demonstrate metacognitive skills as they engage in their daily activities (chores) at home. In Cameroon, much of children's work is done within the family through household chores and errands, and children during late childhood spend most of their time with family and community members. Few studies have examined how children's metacognitive skills develop in these informal settings. The concept is, however, overstudied in the formal context (school) where children spend only a fraction of their daily time. Therefore, there is a need to understand how children manifest metacognitive skills during late childhood as they engage in their daily activities. Additionally, there is a need to understand gender differences in the manifestation of metacognitive skills within the specified age group.

Research Objectives

To evaluate the relationship between age and metacognitive skills during late childhood To find out the difference between gender and the metacognitive skills of children during late childhood.

Hypothesis

H_0: There is no significant relationship between age and metacognitive skills during late childhood

H_0: There is no significant difference between gender and the metacognitive skills of children during late childhood

Methods

Design

The quantitative method using a correlational design was employed to determine the relationship between metacognitive skills and age/gender.

Participants

A total of 250 participants from late childhood (132 girls, 118 boys; age range: 7-12 years) in eleven villages from the Mamfe Central Sub-Division were purposively selected for the study. Mamfe Central Sub-Division is situated in the Southwest Region of Cameroon, Africa. Below is the representation of participants by communities;

Table 1:

Representation of the sample by villages

Villages	Number of Participants (Late Childhood)	Percent (%)
Small Mamfe	50	20.0
Okoyong	10	4.0
Besongabang	30	12.0
Nchang	20	8.0
Eyanchang	20	8.0
Etemetek	20	8.0
Egbekew	20	8.0
BachuoNtai	10	4.0
Eshobi	30	12.0
Eyangntui	30	12.0
Nfaitok 2	10	4.0
Total=11	250	100.0

Note: Table 1 shows the different villages in Mamfe Central Subdivision and the number of participants from these villages.

Materials and Procedure

Metacognitive skills (planning, monitoring, and evaluation) were measured using a structured interview guide. The structured interviews were administered to 250 children in

their late childhood from villages around the Mamfe Central Sub Division, Cameroon. A pilot study was conducted, and the following reliability result was obtained with Cronbach's Alpha = 0.799. Additionally, 15 parents of some of the children were interviewed to gather qualitative data on the development of their children's metacognitive skills.

The structured interview contains questions on planning, monitoring, and evaluation. For each skill, a rating of low, average, and high is adopted. The skill level definition and examples are also provided to guide their structured interview process. Probing was done to guide children during interview sessions. A structured interview was preferred over a self-response questionnaire because it was uncertain that children in this age group would understand the items presented, as questions on the metacognition construct are themselves complicated for children in this age group. Thus, a structured interview allows for probing and is perceived as appropriate because it guides respondents in cases of misunderstanding.

An approval to conduct the research was obtained from the Research Office at the University of Buea, Cameroon. Each interview session lasted an average of 5 minutes, and children were asked to reflect on how they plan, monitor, and evaluate their activities before, during, and after engaging in household chores such as cleaning the house, washing dishes, and cleaning the compound. The children's responses were then evaluated and graded according to their skill levels, categorised as low, average, and high. The data collected were subjected to both descriptive (frequencies and percentages) and inferential analysis (Spearman correlation and Mann-Whitney U-Test).

Results

Based on the sample, most children between the ages of 7 and 12 years score low in planning skills (46.4%), monitoring Skills (48.0%), and evaluation skills (54.4%). A few children scored high in planning skills (14.4%), monitoring skills (8.4%), and evaluation skills (8.8%) (see Table 2-4). Planning and evaluation skills increase with age during late childhood, while monitoring skills remain constant (see Table 5-7; Figure 1). Additionally, there is no significant difference in metacognitive skills (Planning, monitoring, and evaluation) based on gender (see Tables 8-13; Figure 1). The results show a significant relationship between age and metacognitive skills, specifically for planning and evaluation during late childhood, except for monitoring skills. Also, the hypothesis that there is no significant relationship between gender and metacognitive skills (Planning, monitoring, and evaluation) was retained.

This section shows a precise distribution of metacognitive skill levels.

Table 2*:*

Distribution of sample by skill level for Planning

Skill level for planning	Frequency	Percent
Low	116	46.4
Average	98	39.2
High	36	14.4
Total	250	100.0

Table 3:

Distribution of the sample by skill level for monitoring

Skill level for Monitoring	Frequency	Percent
Low	120	48.0
Average	109	43.6
High	21	8.4
Total	250	100.0

Table 4:

Distribution of the sample by skill level for evaluation

Skill level for evaluation	Frequency	Percent
Low	136	54.4
Average	92	36.8
High	22	8.8
Total	250	100.0

Hypothesis tests for Metacognitive Skills (planning, monitoring and Evaluation) and the age of children. (Using Spearman's rank test)

Table 5:

Spearman's rank correlation between planning skills and age

Correlations

			age	Planning Skills
Spearman's rho	age	Correlation Coefficient	1.000	.275**
		Sig. (2-tailed)	.	.000
		N	250	250
	Planning Skills	Correlation Coefficient	.275**	1.000
		Sig. (2-tailed)	.000	.
		N	250	250

****. Correlation is significant at the 0.01 level (2-tailed).**

Note: The table indicates a significant relationship between age and planning skills during late childhood. As age increases during this age group, planning skills increase.

Table 6:

Spearman's rank correlation between monitoring skills and age

Correlations

			age	Monitoring Skills
Spearman's rho	age	Correlation Coefficient	1.000	.101
		Sig. (2-tailed)	.	.113
		N	250	250
	Monitoring Skills	Correlation Coefficient	.101	1.000
		Sig. (2-tailed)	.113	.
		N	250	250

Note: With a sig. = .113 implies that monitoring skillfulness does not change with age during late childhood. The table indicates that there is no significant relationship between monitoring skills and age among children in Mamfe Central Subdivision during late childhood.

Table 7:

Spearman's Rank Correlation between evaluation skills and age

Correlations

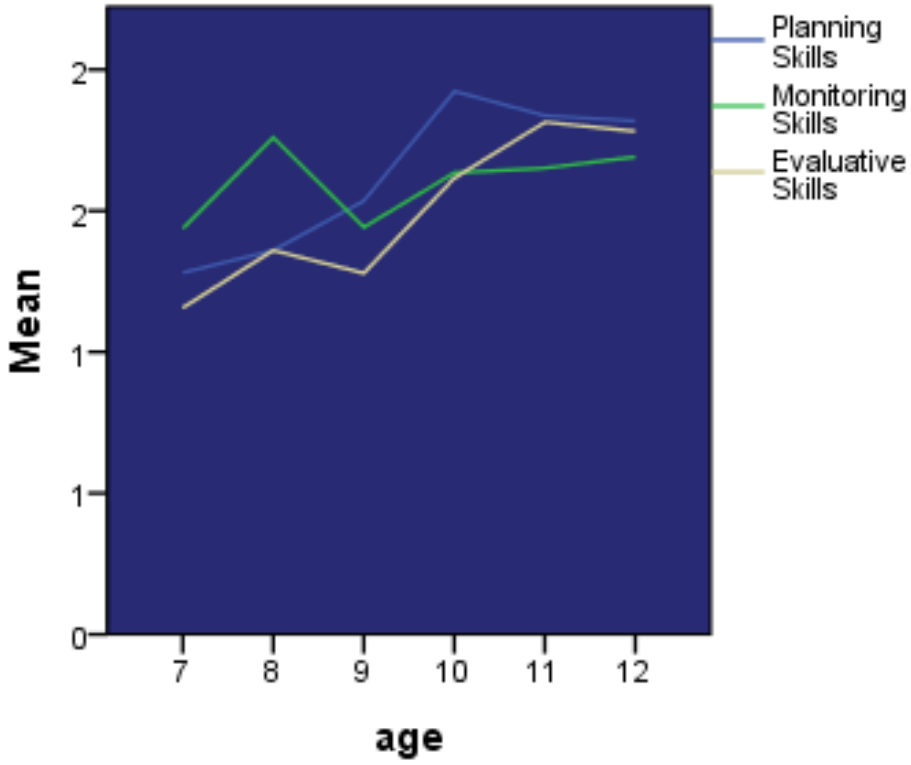
			Evaluative Skills	age
Spearman's rho	Evaluative Skills	Correlation Coefficient	1.000	.383**
		Sig. (2-tailed)	.	.000
		N	250	250
	age	Correlation Coefficient	.383**	1.000
		Sig. (2-tailed)	.000	.
		N	250	250

****. Correlation is significant at the 0.01 level (2-tailed).**

Note: With a sig. = .000 implies evaluation skillfulness does change with age during late childhood. The table indicates a significant relationship between evaluation skills and age among children in Mamfe Central Subdivision during late childhood.

Figure 1:

Line graph of metacognitive skills (Planning, Monitoring and Evaluation) against age



Hypothesis tests of metacognitive skills (planning, monitoring and evaluation) and sex of children. (Using the Mann-Whitney U-Test)

Table 8:

Mean Rank by gender for planning skills

Ranks

	Gender	N	Mean Rank	Sum of Ranks
Planning Skills	boys	118	121.31	14315.00
	girls	132	129.24	17060.00
	Total	250		

Note: Girls scored slightly higher in planning skills.

Table 9:

Mann-Whitney U-Test Statistics by gender for Planning Skills

Test Statistics	
	Planning Skills
Mann-Whitney U	7294.000
Z	-.946
Asymp. Sig. (2-tailed)	.344
a. Grouping Variable: Gender	

Note: The data does not provide statistically significant evidence of a difference in planning skills between boys and girls. (Mann Whitney U, z = -0.946, P = 0.344)

Table 10:

Mean rank by gender for monitoring skills

Ranks				
	Gender	N	Mean Rank	Sum of Ranks
Monitoring Skills	boys	118	126.17	14888.00
	girls	132	124.90	16487.00
	Total	250		

Note: boys score a little high in monitory skills

Table 11:

Mann-Whitney U-Test statistics by gender for monitoring skills

Test Statistics	
	Monitoring Skills
Mann-Whitney U	7709.000
Z	-.154
Asymp. Sig. (2-tailed)	.877

a. Grouping Variable: Gender

Note: The data does not provide statistically significant evidence of a difference in monitoring skills between boys and girls. (Mann Whitney U, z = -0.154, P = 0.877)

Table 12:

Mean rank by gender for evaluation skills

Ranks

	Gender	N	Mean Rank	Sum of Ranks
Evaluative Skills	boys	118	129.36	15265.00
	girls	132	122.05	16110.00
	Total	250		

Note: Boys score a little high in evaluation skills

Table 13:

Mann-Whitney U-test statistics by gender for evaluation skills

Test Statistics

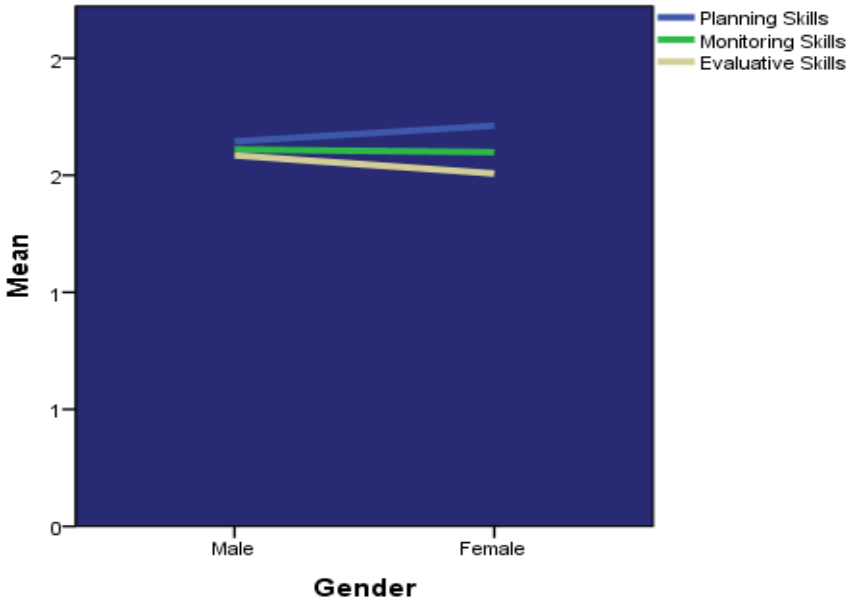
	Evaluative Skills
Mann-Whitney U	7332.000
Z	-.900
Asymp. Sig. (2-tailed)	.368

a. Grouping Variable: Gender

Note: The data does not provide statistically significant evidence of a difference in evaluation skills between boys and girls. (Mann Whitney U, z = -0.900, P = 0.368)

Figure 2*:*

Line graph of metacognitive skills (planning, monitoring and evaluation) against gender



Discussion

The developmental pathways for metacognition can be traced back to the indigenous practices of imitation, observation, and participation in the home and community. As children engage in household chores and community work, their ability to self-regulate their behaviour and thought processes becomes increasingly enriched as they face criticism, praise, and modification of thoughts and behaviour concerning given tasks from caregivers and peers. The genesis of abstract thinking, such as metacognition, lies in the complex nature of the family and child. Based on the findings in this study, as children mature from 7 to 12 years old, planning and evaluation skills significantly increase, while monitoring skills remain constant throughout late childhood.

The results in this study align with those of Veeman & Spaans (2005), Schnitt & Sha (2009), and Van der Stel & Veenman (2010), who found that children exhibit a steep increase in the frequency and quality of metacognitive skills from the age of 8 years onwards. The work of Veenman (2014) revealed a pause or decline in metacognitive skills between the ages of 13 and 16. He concluded that metacognitive growth is interrupted at certain ages. The results of this study show that there is no steady growth in monitoring skills between 7-12 years old (indicating a pause); however, planning and evaluation skills grow steadily within this age group. The maturity in metacognitive skills depends on children's engagement in household chores and other community activities. There was no significant difference in terms of metacognitive skills between boys and girls in late childhood in the Mamfe Central Sub-Division.

The results based on gender are in line with the findings of Hong, Peng, and Rowell (2009); Lenzo, Toffle, Tripodi, & Quattropani (2016), whose studies reveal no difference in metacognitive skills between genders. However, the findings of Ablard & Lipschultz (1998), Leutweiler (2009), and Zimmerman & Martinez-Pons (1990) contradict the results of this study, revealing that girls surpass boys in metacognitive skills between the ages of 9 and 18. Variations in findings on the relationship between gender and metacognitive skills may be due to the different cultural contexts in which the studies were conducted. In the Mamfe Central Sub-division, children as young as seven are often engaged in basic household activities, such as sweeping the house, washing dishes (excluding pots), and picking up dirt around the house. Complex activities for older children (11 and 12 years old) include travelling long distances to fetch water, mopping the floor, washing clothes, and caring for younger siblings. Tasks given to children are age-appropriate, and there is no significant distinction of gender roles when parents in the community assign functions at home. As a result, children's meta-thinking skills specifically, planning, monitoring, and evaluation significantly depend on age, but not on gender, between the ages of 7 and 12.

References

Ablard, K.E., & Lipschultz, R.E. (1998). Self-regulated learning in high-achieving students: Relations to advanced reasoning, achievement goals, and gender. *Journal of Educational Psychology*, *90*, 94–101.

Aurah, C., Koloi-Kealkitse, S., Isaacs, C. & Finch, H. (2011). The Role of metacognition in everyday problem solving among primary students in Kenya.Problems of Education in the 21st Century, 30 (9).

Bryce, D. & Whitebread, D. (2012). The development of metacognitive skills: evidence from observational analysis of young children's behaviour during problem-solving. *Metacognitive Learning*, *7*, 197–217. doi: 10.1007/s11409-012-9091-2

Case, J. &Gunstone, R. (2002). Metacognitive Development as a shift in approach to learning: an in-depth study. *Studies in Higher Education*, 27(4), 459-470. doi: 10.1080/0307507022000011561

Cole, M. & Cole, S. (2001). *The development of children*. New York: Worth Publishers.

Dasen, P. R. (2011). Culture, cognition, and learning. In Nsamenang, A., & Tchombe, T. (Eds.), *Handbook of African Educational Theories and Practices: A generative teacher education curriculum* (1st ed., pp. 207–216). Presses Universitaires d'Afrique.

DeLuca, V. &Nasim, L. (2013). Developing students' metacognitive skills in a data-rich environment. *Journal of STEM Education*, 14(1), 45–55.

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive developmental enquiry. *American Psychologist, 34*, 906–911.

Goos, M., Galbraith, P. & Renshaw, P. (2002). Socially mediated metacognition: Creating collaborative zones of proximal development in small group problem-solving. *Educational Studies in Mathematics*, 49, 193–223.

Henter, R. & Indreica, E. (2014). Metacognitive training for students preparing to be kindergarten and primary school teachers.*Journal Plus Education*, Vol. special issue, 137–144.

Hong, E., Peng, Y., & Rowell, L.L. (2009). Homework self-regulation: Grade, gender, and achievement-level differences. *Learning and Individual Differences*, *19*, 269–276.

Jacobs, G. (2004). A classroom investigation of the growth of metacognition awareness in kindergarten children through the writing process. *Early Childhood Education Journal*, 32(1), 17–23.

Larkin, S. (2006). Collaborative group work and individual development of metacognition in the early years. *Research in Science Education*, 36, 7–27. doi: 10.1007/s11165-006-8147-1

Lenzo, V., Toffle, M., Tripodi, F. & Quattropani, M. (2016). Gender differences in anxiety, depression, and metacognition. *The European Proceedings of Social & Behavioural Schiences*, doi: http://dx.doi.org/10.15405/epsbs.2016.05.02.1

Leutwyler, B. (2009). Metacognitive learning strategies: differentiating developmental patterns in high school. *Metacognition Learning*, 4, 111-123. doi: 10.1007/s11409-009-9037-5

Nsamenang, A.B. (1992). *Human development in cultural context: A third world perspective*. Newbury Park, CA: Sage.

Nsamenang, A. (2005). *Developmental psychology: search for a diversity paradigm*. Bamenda: Anoh's printing services

Nsamenang, B. A. (2011). Towards a philosophy for African education. In Nsamenang A. B. and Tchombe, T.M.S. (Eds). *African educational theories and practices: A generative teacher education handbook*. Yaounde, Cameroon, Presses Universitairesd'Afrique.

Roebers, C. N., Van Loon, M. N., Buehler, F. J., Bayard, N. S., Steiner, M., & Aeschlimann, E. A. (2021). Exploring psychometric properties of children's metacognitive monitoring. Acta Psychologica, 220, https://doi.org/10.1016/j.actpsy.2021.103399

Schmitt, M.C., & Sha, S. (2009). The developmental nature of meta-cognition and the relationship between knowledge and control over time. *Journal of Research in Reading*, *32*, 254–271.

Schneider, W., & Artelt, C. (2010). Metacognition and mathematics education. *ZDM*, 42, 149-161

Schraw, G. & Moshman, D. (1995). Metacognitive Theories. *Educational Psychology Review*, 7(4), 351–371.

Serpell, R. (1993). T*he significance of schooling: Life-journeys in an African society.* New York: Cambridge University Press.

Stephanou, G., & Mpiontini, M. (2017). Metacognitive Knowledge and Metacognitive Regulation in Self-Regulatory Learning Style, and in Its Effects on Performance Expectation and Subsequent Performance across Diverse School Subjects. Psychology, 8, 1941-1975. https://doi.org/10.4236/psych.2017.812125

Tchombe, M. T. (2011). Cultural strategies for cognitive enrichment of learning among the Bamileke of the West Region of Cameroon. In A. Nsamenang& T. Tchombe (Eds*), Handbook of African Educational Theories and Practices: A generative teacher education curriculum* (1st ed., pp. 207–216). Presses universitairesd'Afrique.

Van der Stel, M., & Veenman, M.V.J. (2010). Development of metacognitive skillfulness: A longitudinal study. *Learning and Individual Differences*, *20*, 220-224.

Vauras, M., & Annevirta, T. (2006). Developmental changes in metacognitive skill in elementary school children. *The Journal of Experimental Education*, 74(3), 197-225.

Veeman, M. V. J. (2014). Assessing developmental differences in metacognitive skills with computer logfiles: gender by age interactions. *Psychological Topics*, 23(1), 99-113.

Veenman, M. V. J., Kok, R., & Blote, A. W. (2005).The relation between intellectual and metacognitive skills at the onset of metacognitive skill development. *Instructional Science*, 33, 193–211

Veenman, M. V. J., Van Hout-Wolters, B. H. A. M. & Afflerbach, P. (2006). Metacognition and learning: Conceptual and methodological considerations. *Metacognition Learning, 1*(1), 3-14.

Veenman, M.V.J., & Spaans, M.A. (2005). Relation between intellectual and metacognitive skills: Age and task differences. *Learning and Individual Differences*, *15*, 159-176.

Vukman, K. B. (2005). Developmental Differences in Metacognition and Their Connections with Cognitive Development in Adulthood. *Journal of Adult Development*, 12(4), 211–221. doi: 10.1007/s10804-005-7089-6

Vukman, K. (2012). Metacognition accuracy and learning to learn: A developmental perspective. *Problems of Education in the 21st Century*, 46, 15-21

Vygotsky, L. (1978). Mind in society: *The development of higher psychological processes.* Cambridge, Massachusetts: Harvard University Press.

Wenden, A. L. (1999). An introduction to metacognitive knowledge and beliefs in language learning: Beyond the basics. *System, 27(4)*, 435–441.

Zimmerman, B.J., & Martinez-Pons, M. (1990). Student differences in self-regulated learning: Relating grade, sex, and giftedness to self-efficacy and strategy use. *Journal of Educational Psychology*, *82*, 51–59.