Examining Attributions and Perceptions of Family Influences on the Mindset of Junior High School Students in Different Socioeconomic Settings in Ghana Africa

By Marcellus Gorleku, Ed.D., Sabrina Brancaccio, Ed.D., and James R. Campbell, Ph.D.

Abstract

This paper discusses the role and influences of parental involvement and student's motivation on growth mindset. The participants in this study were from three Catholic middle schools in Ghana: One rural all-girls school (N=268); a suburban school (N=448); and an urban school (N=200). Respondents completed Campbell's Inventory of Parental Influence (IPI S6) questionnaire. Six Parental Involvement and three motivational scales were synthesized using exploratory factor analysis. Path analyses were then conducted to determine the factors with direct or indirect impact on growth mindset. Findings indicate direct link between family influences and mindset in all three socioeconomic settings. Also, motivation and parent's expectation have significant direct impact on children's growth mindset.

Background

Parent involvement in their children's education has been the focus of research for decades. Most studies explored diverse home- and school-based involvement factors with findings that largely support students' achievement (Epstein & Saunders, 2002; Hill & Taylor, 2004). However, clear empirical association has not been identified between family processes and children's mindset.

Prior empirical research studies on parental involvement and academic performance in developing countries, specifically Ghana, indicate that parents' involvement is a bi-dimensional construct of home and school (Chowa, Masa, & Tucker, 2013). The role of Ghanaian parents is changing from the traditional home-based activities of talking to their children about education, creating a conducive home environment for learning and ensuring that necessary homework is done to more interaction with the school, attending meetings and school events (Nyarko, 2011; Chowa, et al., 2013). Studies have also shown a positive correlation between motivation and students' achievement. Students require motivational processes to acquire a better use of new skills and knowledge and to transfer them to new situations (Dweck, 1986). Cho & Lin (2011) emphasized that besides having higher scores, highly motivated students also value their ability to solve problems.

Families and teachers influence how their children attribute their success and their actual performance in school. Dweck (2000, 2010) referred to an individual's implicit views of his or her ability as a mindset with either fixed or malleable (growth) traits. People who have a growth mindset believe that intelligence, personality, and abilities can be developed. People with a fixed mindset believe that these basic qualities are static and unalterable. Research has shown that students' mindsets influence their goal setting and academic achievement (Dweck, 2000). Children with malleable mindsets tend to orient toward learning goals which creates motivation and resilience and leads to higher achievement (Dweck, 2007). Thus, growth mindset promotes learning success of children.

Theoretical Framework

Parental involvement is multidimensional (Campbell, 2004; Fan & Chen, 2001). In developing countries parents in urban or rural settings may offer either school- or home-based involvement processes or both depending on requisite education and resources (Chowa, et al, 2013; Chowa, Ansong & Osei-Akoto, 2012; Nyarko, 2011). Some parental involvement dimensions have been identified as key predictors of academic achievement. These include: expectations (Froiland & Davidson, 2014, Froiland, Peterson, & Davidson, 2013); family communication (Jeynes, 2012); and conducive home atmosphere, parental support and family structure (Campbell & Verna, 2004; Fan & Chen, 2001).Several research studies in developed countries, particularly the U.S., identified parents' expectation of how far their children can go in education as linked positively with academic achievement (Fan, 2001; Hong & Ho, 2005).

Prior research also supports a correlation between various parent involvement dimensions and children's motivation and academic achievement. Campbell & Verna (2004) also described effective parenting as substantial nurturing through various parenting processes such as work ethic, communication, homework and the creation of Academic Home Climates (AHC) that generate a series of

beliefs and attitudes and provide needed motivation at home which guides the child's learning process to enhance greater achievement. Student motivation for learning is generally regarded as one of the most critical determinants of the success and quality of any learning outcome (Mitchell, 1992). Both intrinsic and extrinsic motivation has been identified as having a positive relationship to academic achievement (Ryan, Richard & Deci, 2000). Carol Dweck (2007) suggested that an educator's role is to foster motivation in students so that their talents can be developed. This connection between mind-set and motivation is resonant in an individual's attributions, a theoretical framework that concerns how individuals interpret events and how that relates to their thinking and behavior (Weiner, 1974).

Mindsets are implicit theories that individuals hold about their basic qualities (Dweck, 2000). Prior research has correlated self-concept with attributions and mind-set (Campbell &Walberg, 2011) which indicates that mindset manifests in one's attributions and shapes an individual's expectations and self-concept. Blackwell, Trzesniewski and Dweck (2007) posited that a fixed mindset leads to helplessness, whereas a growth mindset leads to resiliency. Students tend to orient toward performance goals when they believe intelligence is a fixed trait, whereas students who believe intelligence is malleable tend to orient towards learning goals. Thus, performance goals focus children on issues of ability while learning goals encourage children to explore, initiate, and pursue tasks that promote intellectual growth with improved academic achievement (Blackwell et al, 2007).

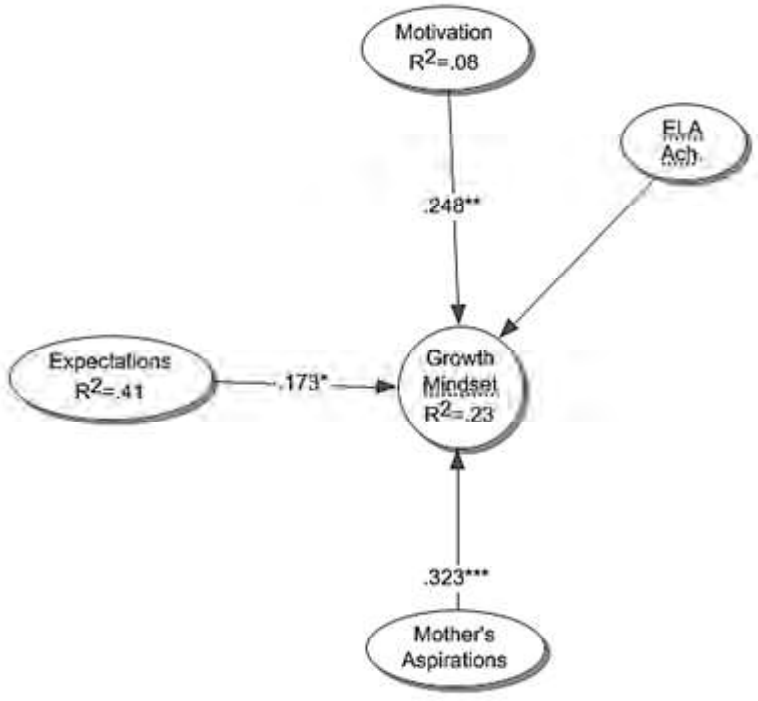
Furthermore, children are motivated to work harder from the interest shown by their parents with resultant academic success (Chowa et al, 2012; Fan & Chen, 2001). But how does engagement of parents in their children's school affect the children's mindset? Could this involvement enhance student's growth mindset? This study provides a basis not only for the identification and isolation of important parental, motivational, and attribution factors that affect student mindset in Ghana, a developing country in Africa, but also for comparing such isolated factors from various cultural and economic settings in a typical developing country.

Methodology and Sample

The participants in this study were 7th, 8th and 9th grade students from three Catholic middle schools in Ghana: One rural all-girls school (N=268); a suburban school (N=448); and an urban school in the capital city, Accra (N=200), 595 girls and 312 boys (total N=907) participated. Campbell's Inventory of Parental Influence (IPI S6) instrument was employed for this study. This IPI S6 designed to measure levels of parental influence on their children from the child's perspective has been previously used for the cross-cultural studies of academic Olympians across the world with good reliability and validity measures (Campbell, 2004). Respondents expressed their degree of agreement or disagreement with a statement (e.g."My family is enthusiastic about my education") on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). These scales were synthesized using exploratory factor analyses (Principal Component Analyses), including six Parental Involvement scales: Parental Expectations, Support, Pressure, Family Communication (child- and parent- talk), Conducive Home Climate and Community Stimulation; and three Motivational (attribution) scales: Low Ambition, Chia-Yi Lin's (2011) High Motivation Scale and Dweck's (2000) Incremental Belief about Intelligence (BOI) test (pp.177-178). The composite reliabilities of these scales ranged from Pc=.669 to Pc= 890. Path analyses were then used to assess the psychometric properties of the measurement model (SmartPLS v.3.2.6, Ringle, Wende, & Becker, 2015) and the structural model. Five thousand bootstrap calculations were also used to determine significances for the direct and indirect paths in the model.

Figure 1

Significant path coefficients for the growth mindset in a rural all-girls school



Findings

Researchers found that in all three socioeconomic settings, children's motivation and parent's expectation were significant direct predictors of children's growth mindset. However, within the rural setting the mother's aspirations also had significant direct effect on development of growth mindset (**see Figure 1**). Thus overall, the more motivated children whose parents had high expectations of their education and, particularly rural girls whose mother's wanted them to attend college, were associated with a growth mindset. Results also show significant direct interactions between parental involvement dimensions with ultimate effect on student's growth mindset.

Table 1 indicates Academic Home Climate (AHC) had three significant connections to Parent's Talk and Support within all three settings; and Child's Talk within the suburban and urban settings; as well as expectations in suburban setting. Also, four parent dimensions namely, AHC, Child Talk, Parent's Talk and Community Stimulation were associated with Parental Support.

However, in the rural setting Parent's education had direct negative association with both parent and child talk. Thus a conducive home climate in a stimulating community is significantly predictive of increased communication between parent and child; more so for parents of lower educational levels in the rural settings; and facilitating more parental support and higher expectations which influenced growth mindset.

Table 1
Significant Direct Effect Path Coefficients for Schools in all three settings

Paths	Setting	Bootstrap Path Coefficient	Bootstrap t value	Bootstrap Probability
2 Parents -> Academic Home Climate	Rural	.182[a]	2.868[b]	.004[c]
Academic Home Climate-> Expectations	Suburban	.096	1.924	.052
Academic Home Climate -> Parent's Talk	Rural	.252	3.154	.002
	Suburban	.358	7.134	.000
	Urban	.190	2.316	.021
Academic Home Climate -> Support	Rural	.257	3.025	.002
	Suburban	.329	6.099	.000
	Urban	.377	4.551	.000
Academic Home Climate -> Child Initiated Talk	Suburban	.315	6.103	.000
	Urban	.369	5.524	.000
Support -> Expectations	Rural	.547	7.622	.000
	Suburban	.455	9.123	.000
Stimulation -> Support	Rural	.209	1.977	.048
Child Initiated Talk -> Support	Urban	.247	2.921	.004
Parent Initiated Talk -> Support	Suburban	.332	5.34	.000
	Urban	-160	2.295	.022
Parent Initiated Talk -> Expectations	Suburban	.158	3.159	.002
	Urban	.382	4.946	.000
Parent's Education -> Parent's Talk	Rural	-392	5.360	.000
	Urban	.194	2.324	.020
Parent's Education -> Child's Talk	Rural	-.223	3.456	.001
Stimulation -> Child's Talk	Rural	.191	2.378	.017
	Urban	.202	2.743	.006

Table 2 indicates that AHC, Parent's Initiated Talk, Parent's Education, Community Stimulation and 2-Parent Family had significant indirect effect on parent's expectation. Also, AHC, Parent Talk and Support had significant indirect effect on growth mindset in one or more socioeconomic settings. Thus, acting like mediator variables, all the parental involvement dimensions seem to exert their influence through expectations which has direct effects on children's growth mindsets.

Discussion and Conclusion

Unlike previous studies which mainly focused on parental involvement and youth academic performance, this study explored parental involvement factors and children's mindsets from different school settings in a developing country, Ghana. Our results indicate that in each school setting Motivation and Parental Expectations and Mother's Aspirations (in rural setting) were the most prevalent direct predictors of children's growth mindset. Thus in the three socioeconomic settings in Ghana, most adolescent children developed growth mindset when their parents demonstrated strong interest in their schoolwork and expected them to progress to a good university or beyond. This generates significant motivational processes which enable the children to acquire new skills, knowledge and value their ability to solve problems with little or no help from teachers. Highly motivated students from homes of high interest and expectation develop growth mindset and tend to orient towards learning goals. They value their ability to solve problems, explore, initiate, and pursue tasks that promote intellectual growth with improved achievement (Hong & Ho, 2005; Dweck, 2007; Blackwell, et al, 2007; Cho & Lin, 2011).

Moreover, this research has shown that direct and indirect interactions between parental involvement dimensions ultimately influenced children's growth mindset with parent's expectations and support playing key roles. Parental support holds the involvement interactions together impacting on children's growth mindset through parents' expectations as the one significant parental involvement predictor. An academic home climate and stimulating community engendered frequent parent-child conversations about education promoting increased parental support. Thus, family members and/or adults in the community influenced children's growth mindset through encouragement, recognition of talents and emphasis on reading. Finally, while student's growth mindset was nurtured mainly through parent-child communication, family support and expectation within mostly the suburban and urban school settings, urban homes often have more reading materials and model better reading habits. This is consistent with research findings which document such multidimensional parent involvement activities as expectation, family communication, conducive home atmosphere, parental support

Table 2
Significant Indirect Effect Path Coefficients for all three settings

Paths	Setting	Bootstrap Path Coefficient	Bootstrap t value	Bootstrap Probability
Academic Home Climate ->Growth	Suburban	.062[a]	3.277[b]	.001[c]
	Urban	.042	1.988	.047
Academic Home Climate ->Expectations	Rural	.170	2.823	.005
	Suburban	.255	7.390	.000
	Urban	.146	2.859	.004
Academic Home Climate -> Support	Suburban	.093	3.096	.002
Parent Initiated Talk ->Expectations	Suburban	.332	5.34	.000
	Urban	-160	2.295	.022
Parent Initiated Talk ->Growth	Suburban	.150	4.933	.000
Parent's education ->Expectations	Rural	-.073	1.992	.046
	Urban	.086	2.014	.044
Stimulation ->Expectations	Rural	.144	2.362	.018
2 Parents ->Expectations	Suburban	.064	2.269	.023
Support -> Growth	Suburban	.080	3.330	.001

and family structure as key predictors of academic achievement and student's mindset (Dweck, 2007; Campbell & Walberg, 2011; Jeynes, 2012; Froiland & Davidson 2014).

Thus, even though complex interactions between parental involvement dimensions manifest differently in the various socioeconomic settings, generally increased communications, home learning environment with high expectations, motivation and support significantly nurture growth mindset in children.

References

Blackwell, L., Trzesniewski, K.H. & Dweck, C. (2007). Implicit theories of intelligence predict achievement across and adolescent transition: A longitudinal study and an intervention. *Child Development*, Vol. 78 (1) 246-263.

Campbell, J.R. (2004) *Cross-cultural research: Basic issues, dilemmas and strategies.* Hameenlinna, Finland: Research Centre for Vocational Education, University of Tampere.

Campbell, J.R. & Verna, M. (2004). Academic home climates across cultures. In J.R. Campbell, K. Tirri, P. Ruohotie & H. Walberg (Eds.) *Cross-cultural research: Basic issues, dilemmas, and strategies* (pp.27-60). Hameenlinna, Finland:Hame Polytechnic.

Campbell, J.R. & Walberg, H. (2011). Olympiad studies: Competitions provide alternatives to developing talents that serve national interests. *Roeper Review*, 33, 1-17.

Cho, S. & Lin, C. Y. (2011). Influence of family processes, motivation, and beliefs about intelligence on creative problem solving of scientifically talented individuals. *Roeper Review,* 33(1), 46-58.

Chowa, G., Masa, R., & Tucker, J. (2013). The effects of parental involvement on academic performance of Ghanaian youth: Testing measurement and relationship using structure equation modeling. *Children and Youth Services Review,* 5(12), 2020-030. Doi:10.1016/j.childyouth.2013.09.009.

Chowa, G. A. N. Ansong, D., & Osei-Akoto, I. (2012). Parental involvement and academic performance in Ghana (*YouthSave Research Brief* 12-42). St. Louis, MO: Washington University, Center for Social Development.

Dweck. C.S. (1986). Motivational processes affecting learning. *American Psychologist*, Vol. 41(10), 1040-1048.

Dweck, C.S. (2010). Mindsets, praise, and gifted education: How our messages help or harm gifted students. Twelfth International European Council for High Ability Conference, Paris, France.

Dweck C.S.(2000). A social-cognitive approach to motivation and personality. *Motivational Science: Social and personality persepctives*.394-415.

Dweck, C.S. (2007). The perils and promises of praise. *Educational Leadership* 65(2), 34-39.

Epstein, J.L, & Sanders, M.G. (2002). *School, family, and community partnerships.* Thousand Oaks, CA; Corwin Press, 2002.

Fan, X. (2001). Parental invovlement and students' academic achievement: A growth modeling analysis. *The Journal of Experimental Education*, 70(1), 27-61. Doi:10.1080/00220970109599497.

Fan, X.& Chen, M. (2001). Parental involvement and student's academic achievement: A meta-analysis. *Educational Psychology Review*, 13(1), 1-22.

Froiland, J.M., & Davidson, M.L. (2014). Parental expectations and school relationships as contributors to adolescent's positive outcomes. *Social Psychology of Education*, 17, 1-17. http://dx.doi,org/10.1007/s11218-013-9237-3.

Foiland, J.M., Peterson, A., & Davidson, M.L. (2013a).The long-term effects of early parent involvement and parent expectation in the USA. *School Psychology International*, 34, 33-50.http//dx.doi.org/10.1177/0143034312454361.

Hong, S. & Ho, H.Z. (2005) Direct and indirect longitudinal effects of parental invovlement on student achievement: Second-order latent growth modeling across ethnic groups. *Journal of Educational Psychology,* 97(1), 32-42.doi:10.1037/0022-0663.97.1.32.

Hill, N.E, & Taylor, L.C. (2004). Parental school involvement and children's academic achievement. *Current Directions in Psychological Science* (Wiley-Blackwell), 13(4), 161-164. doi: 10.111/j.0963-7214.2004.00298.x

Jeynes, W. (2012). A meta-analysis of the efficacy of different types of parental involvement programs for urban students. *Urban Education*, 47(4), 706-742.

Nyarko, K. (2011). Parental school involvement: The case of Ghana. *Journal of Emerging Trends in Education Research and Policy Studies,* 2(5), 378-381.

Mitchell, J. V. Jr. (1992). Interrelationships and predictive efficacy for indices of intrinsic, extrinsic, and self-assessed motivation for learning. *Journal of Research and Development in Education,* 25 (3), 149-155.

Ryan, R.M. & Deci, E.L. (2000). Intrinsic and extrinsic motivation: Classic definitions and new directions. *Contemporary Educational Psychology,* 113, 101-122.

Weiner, B. (1974). Achievement motivation and attribution theory. Morristown, NJ: *General Learning Press.*

Sabrina Brancaccio, Ed.D. is Executive Director of Pupil Personnel Services, Long Beach Public Schools, Long Beach New York.

Marcellus N. Gorleku, Ed.D., is Chaplain and Lecturer, Mount Mary College of Education, Somanya Ghana, West Africa.

James R. Campbell, Ph.D., is Professor Administration and Instructional Leadership, St. John's University, Jamaica New York.