A DEVELOPMENT OF A TEACHER LEADERSHIP FRAMEWORK FOR GIFTED EDUCATION IN THAILAND

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Abstract: Teacher leadership was examined in the context of gifted education in Thailand for a development of an effective framework. An explanatory mixed method design was employed involving both quantitative and qualitative data collection from content analysis; and survey, interview and document from teachers. Results revealed that there were three major areas and nine attributes leading to effective teacher leadership. School leadership, teacher leadership and principles of learning are major considerations for teacher leadership to succeed in gifted education. Findings revealed that the gifted high school under study demonstrated good overall teacher leadership. Two significant areas strongly permeating were teacher collaboration, and teachers' relationship and positive influence on one another. Two areas that were perceived not strongly present by teachers at the school were distributed leadership and professional learning community. The findings suggest that the framework can serve as a guideline for both gifted and general education in Thailand. Since the school is the country's national high school for the gifted; the prevailing teacher leadership practices currently found can to some extent be a legitimate framework to emulate.

Keywords: Teacher Leadership, Gifted Education, Principles of Learning

Introduction

In many countries, the concept of teacher leadership has received much attention from the education circle as it holds promising potential in leading school change. Economic growth, social expectations and political forces together combined has created a climate in which educational reform is expected especially in the age of high accountability. Central to this, is the increased pressures and demands on teachers. Wallace (2002) stated that evidence from research on school's effectiveness and school's improvement has delineated that effective leaders exert a powerful influence on the effectiveness of the school and the achievement of students. Leithwood and Jantzi (2000) posited that findings have shown that even though effective school leaders do bring about a significant influence on student learning outcome, it is the actions of teachers that have acted as the intermediary agents. Briefly stated, the contribution of principal leadership to school effectiveness and improvement is overshadowed by that of teacher leadership (Wallace, 2002). Barth, 2013, reiterated in an interview with *Educational Leadership* that a school's community should be made-up of many leaders: principal, teachers, students, and parents, and 'our business ought to be to promote profound levels of learning in school – and teacher leadership is one of our most powerful assets for doing so.' In an earlier study, Barth also stressed on how schools badly need the leadership of teachers if they are to improve. He asserted that teachers become active learners in an environment where they are leaders. When teachers lead, principals' own capacities get stretched; resulting in higher student learning amidst a democratic community of learners, and the overall impact is that schools benefit from better decisions (Barth, 2001a). The roles teachers play must therefore not be confined to being mere "representatives" of change, rather as "leaders" who dare to enact and initiate change, especially in gifted education where there are higher stakes. The metaphor asserted by Katzenmeyer and Moller in 1996 in their best-selling book *"Awakening the Sleeping Giant: Leadership Development for Teachers"* sends a strong message – that the dormant status of teachers should not be undermined, as when empowered (if aroused) can wield mighty power.

Leadership Theories

Distributed Leadership

A popular leadership theory that supports teacher leadership and has received much empirical support in the last few years is distributed leadership (Gronn, 2000; Spillane, Halverson, & Diamond, 2001; Harris, 2002; Hopkins & Jackson, 2003). Distributed leadership promotes and engages fellow teachers in collegial ambience and is non-traditional leading. The role of the traditional leader is re-conceptualized, and involves the participation of multiple people who take effort in guiding and mobilizing others to bring about effective changes in and beyond the classroom. Leadership is therefore spread to multiple people and tasks are accomplished through building on each other's experiences and knowledge (Spillane et al., 2001). When this happens, the school leader or principal continues to be ultimately responsible for the overall performance or the school, but the role of the principal changes. McGhan (2002) stated that school leadership is a fluid relationship between multiple leaders and followers, involving varied situational and social contexts, and Harris (2002) plainly put it as 'maximizing the human capacity within the organization'

Leithwood and Reil (2003) reiterated that 'research suggests that teacher leaders can help other teachers to embrace goals, to understand the changes that are needed

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to strengthen teaching and learning and to work towards improvement'. Harris and Muijs (2005) pointed out that far too often teachers have worked in their own individual classrooms lacking any productive interaction with colleagues from whom they may gain new insights and understandings about their practice. They stressed that the overarching message about successful school improvement is one of building a community of practice that offers an infrastructure to support teachers leading and learning from each other.

Many studies have also pointed to the positive effect distributed leadership has on teachers' self-efficacy and morale (Greenleaf 1996; MacBeath 1998; Mitchell & Sackney, 2001). Little (1990; 2000) in his research showed that where teachers share good practice and learn together, the securing of quality teaching is ascertained. This supports that collegiality and collaboration are at the core of distributed leadership. However, Harris and Lambert (2003) cautioned that not all collaborative activities will necessarily generate distributed leadership, as it also depends on the level and quality of involvement plus the degree of skillfulness with the group. More importantly, distributed leadership can work only when internal conditions of the school allows it, which means if the formal leadership supports and nurtures collaborative learning, the school will experience a paradigm shift of leadership from formality to leadership by informality, driven by purpose and initiatives. Therefore, it is vital that formal leaders in schools orchestrate and encourage leadership to be dispersed and create the 'shelter conditions' in harnessing conditions for collaborative learning.

Transformational Leadership

Transformational leadership as defined by Northouse (2010) is where leaders display charisma, trustworthiness, creativity, and high levels of articulation skills. Their exceptional communication skills allow them to navigate through their organizations with positive self-assurance. Burns (1978) defined transformational leadership as a process of engaging with others to create a connection that increases motivation and morality in both the leader and follower. Transformational leaders know the capabilities and needs of their followers and attend to them in efforts to motivate and inspire them to work hard and strive for excellence. Bass in 2002, emphasized about the intertwined relationship of transformational leadership and learning organizations, therefore, organizations such as schools will need to change to meet the needs of various stakeholders.

One of the most developed models on transformational leadership was developed by Kenneth Leithwood and his fellow researchers, in response to the lack of effectiveness that instructional leadership was having at many schools (Leithwood, Jantzi, & Steinbach, 1999; Stewart, 2006). According to them, transformational leadership facilitates changes that require new ways of seeing things and changes in basic philosophy. What is important is that the leadership enables and motivates the participation of teachers who play an important role in enacting change at the institution (Leithwood et al. 1999; Leithwood & Poplin, 1992). In Crowther's study, the teacher leader subjects demonstrated leadership qualities that were broadly transformational in nature (Bass, 1985). He described teacher leaders as 'individuals acclaimed not only for their pedagogical excellence, but also for their influence in stimulating change and creating improvement in the schools…' (p. 6).

Principles of Learning for Gifted Education

B*loom's Taxonomy of the Cognitive Domain*

Bloom Taxonomy is a multi-tiered principle of classifying thinking according to six cognitive levels of complexity. Similar to a staircase, learning is progressive with teachers encouraging students to climb higher to a new level of thought. This means that the hierarchical framework requires achievement of a prior skill or ability before the learner progresses to the next, complex level. The three lowest levels of thinking are remembering, understanding, and applying (often referred as knowledge and comprehension skills) while the highest levels of thinking are analyzing, evaluating, and creating (also referred as higher order thinking skills or critical thinking skills).

Bloom's Taxonomy has positive implications to both gifted and general education. A classroom environment designed around the taxonomy provides educators with a framework for designing a curriculum that supports higher levels of thinking (Davis & Rimm, 2004; VanTassel-Baska, 2003). Dixon et al. (2004) noted that when teachers motivate gifted students to develop critical thinking skills, they become 'more effective learners who value what they do' (p. 57). Therefore, teachers who are proficient in providing challenging learning environment will likely view the use of high level learning activities as an essential component of the curriculum (Croft, 2003). These teachers are likely to introduce teaching methods that embodies the incorporation of the six classifications of thinking consistently in their classroom. Wormeli (2005) stressed that, the use of the systematic processes of thinking assists students to interact with, as well as summarize, what they have learned. Therefore, the understanding and implementation of Bloom's Taxonomy of the Cognitive Domain by all teachers will surely reap many benefits in today's teaching and learning practices, not only the gifted but all students in general. Furthermore, the taxonomy embodies a number of principles for a differentiated curriculum for gifted education, and it stimulates student thinking through teacher strategies in various subject areas (Leonard, 2002).

Problem-based Learning

The mainstays of the problem-based learning (PBL) approach are communication skills, cooperative learning,

self-responsibility, and self-evaluation of students' learning process. Grappling with questions is the essence of PBL. According to experts in the field of PBL such as the likes of Kilpatrick (1918, 1921) and Dewey (1938), PBL approaches advocate for the importance of practical experience in learning, and promote meaningful and experiential learning. This principle of learning immerses students in real-world, complex situations in their learning of the curriculum whereby open-ended problems are posed to challenge them to think of the many ways of solving a problem. Gallagher and Stepien (1996) stated that in searching for solution to problems, students simultaneously learn content and improve their skills in research, high-order thinking, decision making and more. They stressed that PBL is particularly useful in secondary gifted education.

PBL has provided viable answers to school reform issues centered on gifted education. Teachers who follow the PBL approach should be aware of some of the common characteristics of this learning principle. According to Swicord (2012), there is always a direct connection to the curriculum and the curriculum is inherently interdisciplinary. The content focuses on questions or problems that students need to be actively engaged in building knowledge in order to discern the meaning of the curriculum concepts. The other characteristic of PBL is that it advocates for a constructivist classroom environment where students in their collaborative groups feel motivated and are self-directed to a significant degree in their pursuit to finding solutions to the problem, while teacher acts as the facilitator (Hmelo-Silver, 2004). Zimmerman (2002) pointed to the large gains that students receive from PBL. He stated that because of the open-ended nature of questions, students get into an experimental learning mode, comprising investigation, explanation, and finally arriving to a meaningful resolution. Similarly, Swicord (2012) addressed that students may even redefine the problem as they research the problem, a process which takes longer than the usual traditional task.

Research Methodology

The main purpose of the study was to explore the effective teacher leadership practices for gifted education so as they can provide a body of knowledge to school leaders and teachers in striving to achieve pedagogical excellence in Thai schools. This study utilized both qualitative and quantitative data collection, and the explanatory mixed-method design of data collection was used specifically to gain insights into the current teacher leadership practices in gifted education in Thailand. The following research objectives guided this study: (1) To identify the effective teacher leadership for gifted education, (2) To identify the current teacher leadership practices that exist for gifted education in Thailand, and (3) To develop an effective teacher leadership framework for gifted education in Thailand. Four methods of data collection were employed in the study: content analysis, teacher leadership survey, interview with top performing teachers and document analysis.

Research Instruments

A content analysis from numerous readings of books, publications, papers etc. led to the identification of three major areas with nine constructs as attributes to effective teacher leadership for gifted education. The three areas are: *school leadership, teacher leadership* and *principles of learning,* while the nine constructs under these areas are *school leadership and climate, distributed leadership; relationship and influence, collaboration, professional learning community, professional development, transformational leadership;* and *Bloom's Taxonomy* and *problem-based learning.* A teacher leadership for gifted education questionnaire was then constructed using the 5-point Likert scale. This provided the basis of the teacher survey with the questionnaire comprising 50 questions. The findings from the survey were later used to investigate significant issues that emerged, which led to the next sequential step of data collection; one-on-one interviews with top-performing teachers, and the last sequence saw analyses done on teaching documents.

Participants

A purposive sampling was used targeting all teachers currently employed at the country's only national high school for the gifted. One-on-one interviews were also carried out with five randomly, student-selected teachers of the school.

Findings

A descriptive analysis was conducted to examine the current teacher leadership practice that exists for gifted education in Thailand. The findings revealed that good teacher leadership practices were already favorably in place at the gifted school. None of the 50 items in the questionnaire scored an average mean lower than 2.50. The top three teacher leadership practices of *Collaboration (M=4.12); Relationship and Influence (M=3.99); and Transformational Leadership (M=3.88)* were evident from the survey, interview and document analysis, indicating strong individual efficacies. *Distributed leadership (M=3.15)* remained an area where enhancement is needed especially on a call for a more accessible communication channel between school administrators and teachers.

It was also found that many teachers practiced the two principles of learning suited for gifted learners as manifested from their responses, and later complemented by the five teacher's documents in substantiating their understanding of *Bloom's Taxonomy (M=3.61)* and the application of *PBL (M=3.61)* in classrooms. Although initial findings from the survey did reveal that teachers either belonged in the 'knowledgeable about Bloom' group or in the group that are 'not knowledgeable about Bloom', the interviews and document analyses helped allay these fears. Moreover, careful scrutiny of other

individual questions asked about the taxonomy, did indicate that teachers at the school applied Bloom in classrooms, though they may not know it theoretically.

Discussion

The findings of the research revealed crucial practices that must be implemented and promoted in order to facilitate and enhance effective teacher leadership in gifted education in Thailand. The content analysis done on the effective teacher leadership practices identified three major areas *(school leadership, teacher leadership, and principles of learning),* with a total of nine constructs *(school leadership, distributed leadership, relationship and positive influence, collaboration, professional learning community, professional development, transformational leadership, Bloom's Taxonomy and problem-based learning)* that are said to be attributes to effective teacher leadership. Overall findings from the teacher survey, interviews and document analysis revealed that teacher leadership practices were visibly present at the school as their mean scores ranged from 3.15 to 4.12. None of the constructs fell below the mid-point mean of 2.50.

It is interesting to note that the top three constructs that posed significantly higher mean scores than the others were related to teacher's self-efficacy. They were *collaboration (M=4.12); relationship and influence (M=3.99)*; and *transformational leadership (M=3.88)*. Respecting their colleagues' different values and beliefs was the highest on the list, followed by being good listeners when colleagues talk about teaching experiences; and are happy to assist one another. Teachers are also open to receiving feedback and comments from fellow teachers in an atmosphere where trust and respect prevail. They were also found to be happy sharing teaching materials and were comfortable in seeking help from other teachers when the need arose for some creative teaching ideas. In classrooms, teachers communicated the learning goals to their students and motivated them towards attaining the goals. Teachers also practiced the integration of moral issues and ethics in classroom discussions. In creating good relationships with students, the findings indicated that teachers made time to have small conversations with their students, before and after class. This supports research findings which purported that a school's learning outcome is associated with more positive teacher and student relationship (Gehlbach, Brinkworth, & Harris, 2011; Moos & Moos, 1978)

Four constructs that scored relatively well within the mean range of 3.57 – 3.68 were *school leadership and climate*, *Bloom's Taxonomy*, *problem-based learning*, and *professional development.* Findings revealed that teachers apply differentiation strategies in engaging students and were comfortable with the use of questioning, role-playing, debates, brainstorming, concept-maps, inquiry-based learning etc. The continuous use of varied teaching methods have been found to result in higher student engagement and subsequently, successful learning. Fenner, Mansour, and Sydor (2010), in their study found that students' motivation level increased with teachers' good instructional designs. An item under *school leadership and climate* that scored relatively well was the definition and communication of the school goals to teachers. Teachers were well aware of the school's goals. The two items under the respective *principles of learning* that scored well with the teachers were the use of effective questioning in classrooms. Teachers professed that they used triggering, probing, analyzing, redirecting, follow-up types of questioning in encouraging the application of the gifted students' higher order thinking skills. Under *professional development*, the findings revealed that teachers were all generally happy with the teaching and learning resources, materials and technology available at the school. Furthermore, teachers also indicated that they were consistently searching for new teaching techniques to improve their professional skills.

Two constructs that were ranked at the moderate end of the means score ranging from 3.15 to 3.38 were *distributed leadership* and *professional learning community*. The former ranked the lowest of the nine constructs. One significant item that teachers noted was important was to see more open communication channel between administrators and teachers, so that discussions involving school improvement and student learning can take place. Besides that, under *professional learning community*, teachers felt that they needed more time to develop professionally.

Findings from the interview of top-performing teachers confirmed some of the highlights obtained from the survey. Teachers were generally very satisfied with the level of collaboration between teachers. From the survey, *collaboration* scored the highest mean. Similarly, some significant responses from the interview supported the findings of the survey, such as the issue on lack of time as obstacles to teachers' professional growth and development. One interesting point raised was that all five teachers interviewed agreed that teachers teaching in a gifted school should undergo training on how to teach gifted students, as the basic knowledge in teaching alone may be insufficient. This underlined what six gifted experts strongly agreed on when they were asked of the 'core non-negotiables' that teachers of the gifted ought to have. Gallagher, Kaplan, Reiss, Renzulli, Tomlinson, and VanTassel-Baska in a 2001 interview with Rizza and Gentry, are convinced that teachers need to be aware and understand the different services and methods available to meet these gifted students' needs in order for the implementation to occur. The scholarly six argued that the scope of the teaching and learning need to move beyond low level processing and into more advanced areas of knowledge and skills, and therefore it is important that teachers know how to take their students gradually up the taxonomy of how human processes their thinking.

Four out of the five teachers interviewed had an understanding of Bloom's Taxonomy. However, the

teacher that was unfamiliar with Bloom Taxonomy did demonstrate the application of the thinking classifications with the teaching methods used in the classroom as discovered from the teaching documents. This clarified the survey findings whereby only a medium mean was scored for the understanding on Bloom's Taxonomy, whereby teachers belonged in two opposite extremes; they were either 'knowledgeable about Bloom' or 'not knowledgeable about Bloom'. The sequential data collection of the interview therefore helped allay this shortcoming to some extent.

On the other hand, this does not necessary conclude that all teachers at the school who are unaware of Bloom's Taxonomy are applying the thinking classifications in their classrooms. Leta Hollingworth, in her teaching for the gifted cautioned that when teachers are not adequately equipped with knowledge and skills, complex teaching methods will not prevail. Pedagogy excellence can only be attainable if it includes curriculum differentiation, substantiated in the final step of data collection – a document analysis. The documents analyzed were lesson plans, class worksheets, assignment handouts and mini-projects. The findings revealed that these top-performing teachers did apply instructional strategies that trigger the gifted students' higher order thinking.

The overall findings from content analysis, survey, and interview and document analysis led to the design of the preliminary framework on teacher leadership for gifted education in Thailand. It is hoped that the framework will create awareness among school leaders and teachers that the 21st century school leadership calls for more concerted effort and partnership from both teachers and administrators in leading school change. More importantly, the call is stronger for teachers to emerge as 'leaders' and 'agents of change' rather than mere 'representatives of change'. The figure below represents the preliminary output of this study.

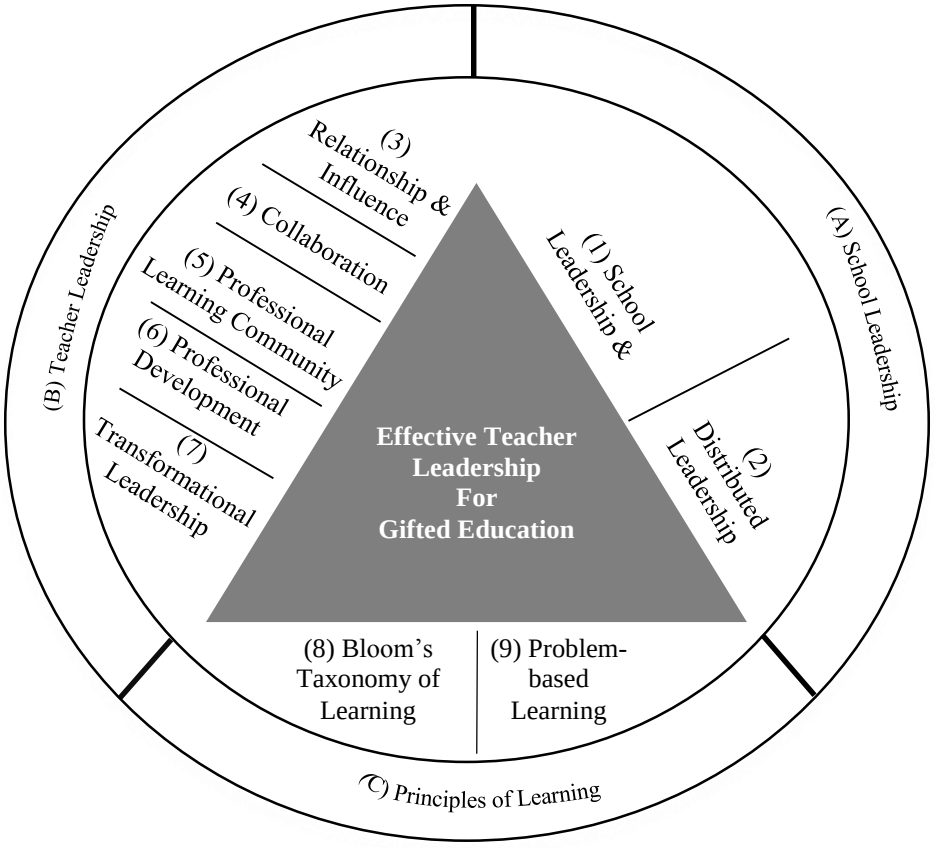

Figure 1: Preliminary Framework of Effective Teacher Leadership for Gifted Education

higher-order thinking, and inquiry-based teaching, and that requires teachers' understanding of intellectual conceptual knowledge and skills appropriate for gifted learners. Therefore, this matter on all teachers having an understanding of Bloom in the school needs further investigation. The interview also confirmed that teachers were comfortable using the problem-based learning approach as one of the school's graduation requirements is to conduct a research project. This was later

Application of the Framework

There are three major areas (outer ring) under the preliminary framework, as indicated alphabetically as (A) School Leadership, (B) Teacher Leadership (C) Principles of Learning. School leadership refers to leadership that belongs in the hands of administrators. Teacher leadership literally means leadership demonstrated by teachers. Principles of learning are two fundamental teaching principles that have been advocated

to work best with all students; especially if applied with gifted students.

The framework forms a skeletal support in pursuit of the ultimate goal – to attain "Effective Teacher Leadership for Gifted Education" (as indicated in the triangle). There is no pre-set directional start point for this framework, despite the preconceived belief that school leadership should lead the way in leading school change. Interactions between the three major areas are intertwined and revolving; therefore initiatives need not necessary come from top-down, rather a dyadic-directional relationship. The discussions that follow suit will highlight each construct's functionality, and their proposed implications under their respective areas.

(A) SCHOOL LEADERSHIP

School leadership refers to the type of leadership displayed by the school administrators or principals who lead and manage the school.

1. School leadership & Climate

Function:

School leadership is defined as the type of leadership displayed by the school principals or administrators who lead and manage the school. Under school leadership, the school's climate is the characterization of the internal climate of the school that encompasses school's atmosphere, tone, the personality or ethos of the school (Green, 2010). Both constructs; *Leadership and Climate* serve crucial functions as they essentially dictate the responses and actions of followers in a school; in this case, teachers.

Implications:

1) School leaders should ensure first and foremost that the school's goals have been defined and communicated to all teachers. This can be done through teacher orientation, the dissemination of school's publications, at school meetings etc.
2) School leaders must ensure that the curriculum is designed to cater and challenge the gifted learners, and are achievable by students. School leaders and teachers can work concertedly in determining the best curriculum that will challenge the intellectual abilities of the students. Joint-participation from external curriculum specialists would also ensure that the curriculum meets the academic skills as well as the technical and scientific know-hows of industries.
3) School leaders must ensure that the school climate is supportive and encouraging so as to facilitate the emergence of teacher-leaders. This can be achieved by empowering teachers to have a voice in the improvements that would lead to higher student achievement.

2. Distributed Leadership

Function

Distributed Leadership, reinforces the fact that leadership in the 21st century is no longer hierarchical. At the core of this leadership is the engagement of many people in a leadership activity, hence leadership is dispersed or distributed (Hopkins and Jackson, 2003). There have been many studies within the teacher leadership literature that manifested the positive effect of distributed leadership on teachers' self-efficacy and morale (Macbeath 1998, Crowther, Hann, McMaster, & Ferguson, 2000). Evidence from these studies suggested that where teachers share their practices and learn together, the potential of achieving better teaching quality is increased.

Implications:

1) School leadership must re-conceptualize leadership practices in the 21st century as only through the application of distributed leadership can capacity building unleash the leadership potential in individuals, subsequently, teacher leaders can emerge. Gronn (2000) coined this "an emergent property of a group or network of individuals in which group members pool their expertise" as means of generating and sustaining school improvement.
2) School leaders and teachers need to form a partnership and work as a team. Distributed leadership which focuses on the creation of a synergy of expertise within individuals of a school, rather than a single energy from one individual, means teachers are involved in decision-making processes concerning school improvements. School leaders can initiate task-force teams comprising teachers to lead on some of the improvement projects of the school.
3) When leadership is distributed, teachers and administrators will share open communication with one another, and teachers will feel comfortable to freely express their opinions towards school improvements and student learning.

(B) TEACHER LEADERS

Teacher leaders are teachers who assume formally or informally, one or more of a wider array of leadership roles to support school and student success. Teacher leaders model continual improvement, model lifelong learning, and use what they learn to help students achieve success (Harrison & Killion, 2007). Therefore, teacher leadership is a process by which teachers, individually or collectively; influence their colleagues, principals, and other members of the school community to improve teaching and learning practices with the aim of increased student learning and achievement (York-Barr & Duke, 2004). There are a total of five constructs under the stewardship of teacher leaders.

3. Relationship and Influence

Function
This construct is psychologically-related to social behavior; and how social behavior is goal-oriented. The relationships we establish with others serve our goals; such as the need for social ties and the desire to understand ourselves and others. It also fulfills our need to gain or maintain status and to make friends.

Implications:

1) Schools should encourage teachers to forge good relationships with each other, by arranging team-building exercises, off-sites meetings etc.
2) School teachers should also be respectful of the differences in beliefs and values of their colleagues so that collegiality can take place. In schools where there are both local and foreign teachers, it is highly recommended for teachers to undergo some kind of culture orientation.
3) Teachers should be attentive listeners; and be more than willing to assist their fellow colleagues in non-teaching related issues.

Research on school improvement have consistently attributed the effects collegial relationships have on school improvement and change, as Little (1990) pointed out, collegial interaction lays the groundwork for developing ideas, and exchanges between teachers.

4. Collaboration

Function:
Harris and Muijs (2003) postulated that collaboration is at the heart of teacher leadership, as it is premised upon change that is enacted collectively. Collaborative acts see the pooling of teachers' knowledge, expertise and capacities. It allows unlimited opportunities to learn from one other, ultimately, resulting in multiplication effects in classrooms.

Implications:

1) Schools should encourage the culture of collaboration among teachers. Through collaboration, teachers are afforded opportunities to work cohesively and collectively. Teachers can discuss new ideas, craft innovative instructional strategies with colleagues, share common class materials, discuss problems etc. with the fellow teachers, within their department or with teachers from other departments.
2) The culture of collaboration would also lead to mutual trust and respect among colleagues. Once trust and respect are in place, teachers will view classroom observations as non-threatening.

5. Professional Learning Community (PLC)

Function:
PLC occurs when an entire group of professionals in a school comes together to learn from each other, within a supportive, self-created community (Morrissey, 2000). To create such collective efficacy is dependent on the school leader, or the administrators.

Implications:

1) To encourage school teachers to be more opened to changes, and embrace the fact that successful contribution to student learning is no longer a function of an individual's effort but the collective efforts of all. (Dufour, 1998, 2004; Sergiovanni, 2004). This can be achieved through formalizing time for teachers to engage in talks, discussions with their colleagues in a non-threatening environment, such as teacher's lounge, cafeteria etc.
2) School teachers should make more attempts to interact with teachers from other departments, ultimately, working collaboratively, and learning from teachers from the outside community.
3) School teachers should also try to be actively engaged in discussions, to have time to reflect on one's own teaching practices, and to share new teaching ideas anytime; informally and formally. In monitoring one's own self-efficacy, teachers should be receptive to feedback and comments from colleagues.
4) Schools should encourage teachers to set aside more time for reflection on their teaching practices with their colleagues.

6. Professional Development

Function:
Professional Development is a comprehensive, sustained, and intensive approach to improving teachers' effectiveness in raising student achievement. Besides that, professional development also underpins the lifelong learning philosophy.

Implications:

1) Schools should ensure that teachers are supported with on-going training as per the applicable training policy allowed to teachers. To ensure the effectiveness of training, schools can make training as one of the measureable KPIs (key performance indicators of teachers.)
2) Schools should free teachers' time to allow for self-development to take place.

7. Transformational Leadership

Function:
Transformational leadership, as Bass (1985) contended, is leadership that impacts followers by (a) raising followers level of consciousness about the importance and value of specified and idealized goals; (b) by getting followers to transcend their own self-interest for the sake of the team or organization, and c) by moving followers to address higher-level needs.

Implications:

1) Teacher should assume transformational leadership roles in their classrooms as research on effective general education and special education teachers has evidently pointed out that what teachers do in the classroom affect student achievement gains (Brownell, Leko, Kamman, & King, 2008).
2) Teachers should communicate learning goals to students and find ways to motivate students towards the goals.
3) Teachers should be highly initiative to seek out new instructional methods so as to continuously engage the minds of this high ability group of learners.
4) Teachers should try to engage in fostering more teacher-student relationship not only during class hours but beyond classroom hours.

(C) PRINCIPLES OF LEARNING

8. Bloom's Taxonomy of Cognitive Domain

Function:
Bloom's Taxonomy refers to the classification of the goals in education regarding the development of intelligence. In the cognitive domain, there are six levels of thinking classification, and one that a gifted school should emphasize is the higher order thinking skills (analyze, evaluate and create).

Implications:

1) Teachers should be aware of how humans process their thinking; therefore an understanding of Bloom's Taxonomy will provide teachers will the necessary pedagogical knowledge on how to approach logical thinking from lower to higher levels. School leaders should make arrangement for teachers to be trained in gifted programs. This is applicable for both science and non-science teachers.
2) Teachers with understanding of Bloom's taxonomy can consciously plan their lessons; and in a gifted education, teachers will be able to execute the appropriate instructional strategies to guide the gifted students' thinking and skillfully take them up the taxonomy of higher order thinking skills.

9. Problem-based Learning (PBL)

Function:
PBL is an instructional, student-centered strategy in which groups of students are confronted with real problems to solve. Constructivist in nature, the main goals of PBL is for students to identify information gaps and to seek and organize new information on account of the described problem. PBL's strengths among others are the fostering of autonomous learning and personal responsibility, which has been advocated in past literature as highly suitable for gifted students.

Implications:

1) Teachers should introduce authentic issues and problems to students to allow for advanced thinking to take place so as these gifted students can demonstrate their full potential in critical analyses and evaluation, and creative solutions.
2) Teachers should encourage students to work in peer-groups to facilitate advanced research and cooperation among students, as well as to allow students to undertake independent study in investigating the problem at hand. According to Yelland, Cope, and Kalantzis (2008); Etherington, (2011), PBL leads to an enhancement in students' reflective, communicative and collaborative skills as each student brings different views and reflections.
3) Teachers should allow time for PBL tasks especially for gifted students as the designs of PBL facilitates self-directed learning, and collaboration; hence are ideal learning skills suited for the gifted. In a study done by Hoy and Hoy (2009), the researchers revealed that in PBL, students get the opportunity to learn independently, as well as cooperatively, and use their new found knowledge to solve the problem at hand.

Conclusion and Recommendations

The main intention of this research was to provide some form of knowledge to administrators and teachers concerning the importance of teacher leadership and its effect to students' achievement. Teachers in gifted education especially, need to assume ownership of their profession and be leaders in their classrooms to meet the students' special needs and abilities. As Harris and Muijs (2005) stressed, teacher professionalism and expanded leadership roles serve students best as teachers are the closest to classrooms, and therefore are key change agents that can implement changes that make a difference to learning and learners.

The findings from the study revealed that some exemplary teacher leadership practices are already visibly permeating at the country's only national high school of the gifted. However, based on some of the findings of the study, the following recommendations are offered to both school leaders and for future research.

Recommendation to School Leaders

1. Make more participatory vs authoritative decision making on issues regarding teaching and learning. More participatory effort from many individuals than a single individual has been advocated for today's schools.

2. Practice open communication with teachers so that expression of ideas and thoughts on teaching and learning improvements can occur.

3. Provide teachers with sufficient time to take stock of their teaching practices, undertake better lesson planning, as well as participate in more collaborative acts with their colleagues in either the exchange of teaching ideas, or the creation of a professional learning community. Ovando (1994) in his study revealed that a central component leading to school success is 'having the time to meet'. Schools that were on the road to improvement gave teachers dedicated time to collaborate with one another. Furthermore, the world's top-performing schools such as in Finland and Singapore are practicing teach less learn more (TLLM) practice.

4. Encourage teachers to undertake on-going professional development courses to develop their skills. Six renowned scholars in gifted education stressed on the importance of teachers teaching gifted students to know the various teaching methods to meet their students' needs. These scholars believed that without proper gifted training, the implementation of good instructional strategies for the gifted will not take place.

5. This new knowledge on the nine constructs can be implemented in schools as the nine constructs were identified through arduous reading of literature, papers and books etc. Furthermore, these nine constructs are also present at the country's number one high school from findings of survey, interview and document analyses. Therefore, the framework serves as a good model for effective teacher leadership practices. The nine constructs provide good start-up points for school leaders and teachers to explore in the hope of achieving pedagogical excellence in classrooms.

Recommendation for future research

6. One other data collection that can help examine if teachers are practicing some of the advocated principles of learning suited for gifted learners is to conduct classroom observations.

7. More research should be undertaken focusing on distributed leadership, one of the least perceivable attributes at the school under study. Lashway (2003) termed distributed leadership as being in its embryonic stage where more investigation should be underway to elucidate the relationship between distributed leadership and school improvement. Furthermore, with distributed leadership representing a powerful concept of new thinking about school leadership today, Harris (2005) reiterated the high need to identify what constitute distributed leadership, and the conditions for it to flourish and grow in a school environment.

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