

# A Comparison of Instructional Leadership: An Analysis of The Model

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## Abstract

School leadership is one main factor in improving students' learning achievement. This concept paper discusses instructional leadership, which refers to a principal's or headmaster's leadership style that elevates excellence and motivates teachers in a school, contributing to the development of human capital. This leadership involves the principal's or headmaster's awareness of the teachers' teaching, students' learning, and their development, as well as the creation of a conducive learning environment to drive school excellence. In the context of Malaysian education, principals and headmasters are recommended to act as instructional leaders as stated in the Malaysian Education Development Plan (PPPM) 2013-2025. Hence, this study aims to compare different instructional leadership models using document analysis method. This concept paper discusses the definition of instructional leadership and theories or models of instructional leadership. The instructional leadership theories in this concept paper discuss instructional models, namely the Hallinger and Murphy's Model (1985), Murphy's Model (1990), Krug's Model (1992), McEwan's Model (2003), and Hallinger's Model (2011). The findings reveal that all these instructional leadership models share the same basic dimensions, namely: a) defining and communicating school goals; b) monitoring and providing feedback on teaching and learning processes; and c) promoting and focusing on the professional development of teachers and leaders. At the end of this concept paper, a comparison is made between instructional models, touching on the dimensions and elements of each model. It is hoped that this concept paper can serve as a reference for other researchers as an addition to the literature on instructional leadership for principals or headmasters.

**Keywords:** School Leadership, Instructional Leadership, Hallinger Model

## Introduction

The excellence of school leadership is able to increase the success of students' learning (Kiral, 2020; Ilminza et al., 2021). In relation to that, the Malaysian Ministry of Education (KPM)

strives to empower school leadership by introducing the fifth transformation of the education system, which is to ensure that high-performing leaders are placed in every school (KPM, 2013). The Malaysian Education Development Plan (PPPM) 2013–2025 also states that students' success can be increased by 20% if principals or headmasters focus on instructional leadership instead of administrative leadership (KPM, 2013). Therefore, KPM strives to create success from the leadership of high-performing leaders. Leadership in each school is strengthened by developing and making principals or headmasters, senior assistant teachers, senior subject teachers and committee heads as instructional leaders (KPM, 2013). Therefore, changes especially in terms of school leadership need to be done to achieve excellent academic results.

This study is very important to readers and researchers who are interested in knowing about the basic knowledge related to Instructional Leadership. Among them are knowing the meaning of instructional leadership and knowing the elements in the dimensions of instructional leadership. Therefore, it is hope that this paper would boost self-confidence among the target groups such as principals, teachers and leaders in applying instructional leadership skills in schools. Consequently, it could motivated them to be a good leader.

### **Problem Statement**

School effectiveness is usually measured and evaluated in terms of school success or achievement in examinations or assessments. An excellent school is able to create a sense of satisfaction of learning and working by being led by a headmaster or principal. The leadership style of the headmaster or principal in school should coincide and correspond to the goals and objectives of a leader in administering his organization. The headmaster or principal should play his role as an instructional leader and a strong leader in terms of power and facilities available to implement change. The role of headmaster or principal instructional leadership can directly improve the teaching quality of teacher (Dayangku Rodzianah & Mohd Izham, 2021). However, there are headmaster or principal who do not practice instructional leadership because of the complex tasks in administrative matters (Foong & Mohd.Khairuddin, (2017); Rashidah, Mohd Izham & Mohamed Yusoff 2022). Means that not all headmaster or principal have the opportunity to implement teaching and learning well when there are differences in the level of their instructional leadership practice (Rozila & Jamalul Lail, 2019).

However, instructional headmaster or principal are seen to improve school performance by influencing teachers in improving the teaching and learning of their students (Yusri & Aziz, 2014). Evidence by the studies that show a high relationship between the level of instructional leadership practice and teacher commitment and can contribute to the emergence of human capital (Rodzianah & Izham, 2021; Rashidah eta l., 2022). Hence, this paper is made to find out the definition of instructional leadership and theories and models of instructional leadership related that should contribute to the development of students.

### **Methodology**

The researcher has chosen qualitative study design by document analysis method. Among the databases referenced include Google scholar and University Library website consist of article, journal and theses. Based on the search using the keyword model instructional leadership, researchers chose to analyze five leadership models instructional. This concept paper will only focusing from the angle of the elements contained in each model for the purpose of comparing difference. With this method of analysis is expected to be a formulation of the

elements developed for the purpose of improving the practice of instructional leadership in Malaysia.

### **Definition Of Instructional Leadership**

The Principal or Headmaster (PGB) needs to play a role as an instructional leader aside from managing school administration matters. According to Rashidah et al (2022), the most important element that determines the success of school leaders as effective leaders or otherwise is their ability to perform their role as instructional leaders. Changes in education are always happening, and a leader should always be ready with something innovative in the face of those changes. Instructional leaders are leaders who are ready to change by influencing and showing the level of change in various aspects, especially aspects of the curriculum in schools (Rodzianah & Izham, 2021).

According to Hazirah and Izham (2021), instructional leadership is defined as leadership that is very much needed by PGB to improve the effectiveness of teaching in schools. This statement is in line with the study of Jeffri et al (2019), which defines instructional leadership as a school leader who is able to plan, distribute, monitor, and evaluate the teacher's duties and indirectly improve student performance and school excellence (Zaliza & Izham, 2018). Effective instructional leaders are those who have certain characteristics such as intelligence, honesty, integrity, leadership drive, readiness to change, self-confidence, and creativity (Bibi et al., 2020).

According to Samsiah & Khalip (2019), in addition to the definition of setting school goals, providing resources for learning, managing the curriculum, controlling lesson plans, and evaluating teachers, scholarly research also applies the latest technology to PGB instructional leadership behaviour. Thus, the element of Information and Communication Technology (ICT) has been added to the definition of instructional leadership, especially in this native digital era (Aidawati, 2021). Despite that, in general, most definitions of instructional leadership revolve around elements of PGB behaviour that aim to improve teaching and learning practises (*PdP*), improve teachers' teaching competence, and subsequently improve academic achievement (Samsiah & Khalip, 2019; Sofiah & Salwana, 2020).

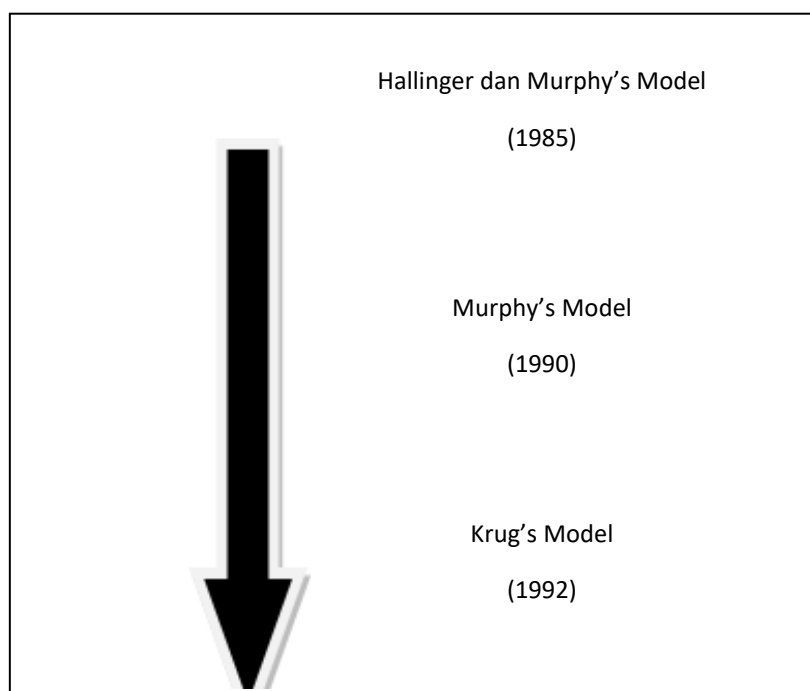
Based on these definitions, it can be concluded that instructional leadership is a process where a PGB plays a role in influencing the behaviour of teachers, students, and school staff, mobilising energy towards achieving the vision and mission of each school according to the latest developments in education and technology.

### **Instructional Leadership Model**

Hallinger (2005) explains that instructional leadership is the most appropriate and still relevant form of leadership practised in the 21st century, although there is competition with transformational and distributive leadership. The instructional leadership model has been developed since the 1980s by western researchers such as (Hallinger and Murphy, 1985; Murphy, 1990; Krug, 1992; McEwan, 2003; Hallinger, 2011). In addition to western instructional leadership models, local instructional leadership models are also developed in Malaysia. Among them is the instructional leadership model developed by researchers (Jamelaa, 2012; Rahimi, 2017; Irdayanti, 2016). All of these instructional models show that there are similarities and differences between western and local instructional leadership models. Based on the examples of instructional models given, it was found that the number of elements for each model is different because the focus and context of the study are

different (Samichan et al., 2021). Hallinger and Murphy's (1985) model is the most frequently used instructional model in instructional leadership studies by domestic and foreign scholars.

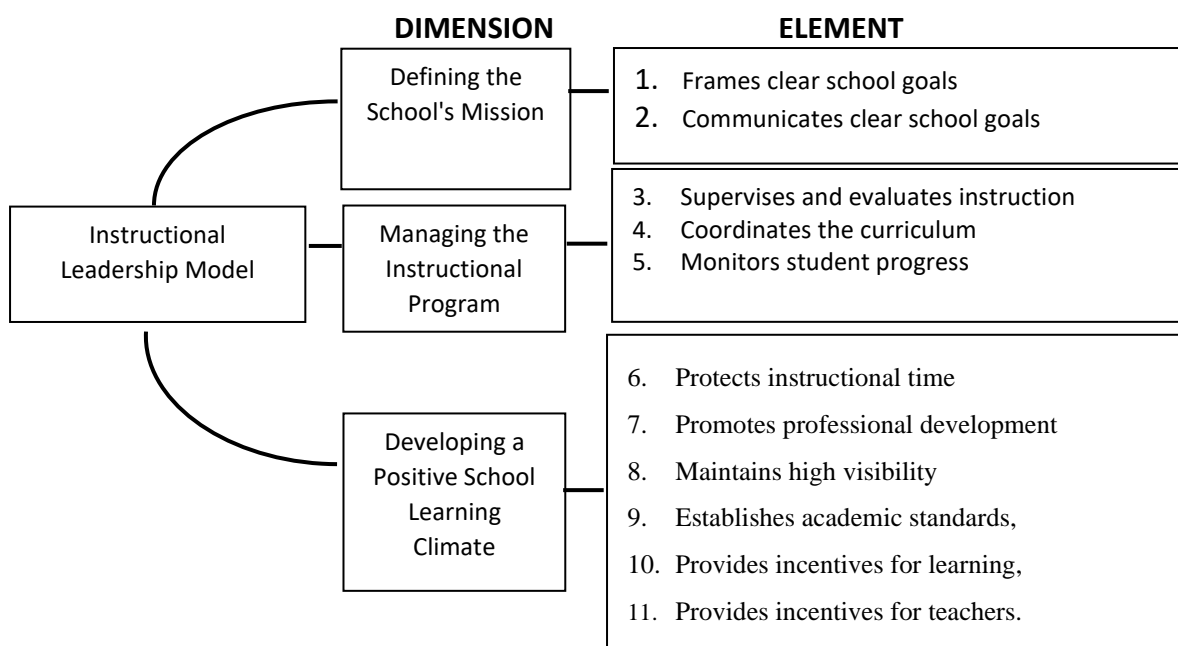
The theory of instructional leadership was first introduced by Hallinger and Murphy in 1985. Hallinger and Murphy's (1985) model lists eleven principals' instructional leadership practises in schools. The development and improvement of the instructional leadership model continue to strengthen the theory of instructional leadership, as shown in figure 1 (Hallinger & Murphy, 1985; Hallinger, 2011).



*Diagram 1* the development of instructional leadership models

### **Hallinger and Murphy's model (1985)**

In 1985, Philip Hallinger and Joseph Murphy introduced an instructional leadership model known as the Hallinger and Murphy Model. Hallinger and Murphy did a study on ten effective elementary school principals in a district. The study was analysed based on the most effective schools by quoting instructional leadership practices from principals, staff, and education officers using questionnaires. All information obtained is matched with document evidence, monitoring, meeting minutes, and activities carried out by the principal. Hallinger and Murphy's (1985) model lists three (3) main dimensions and has eleven (11) elements or practices of PGB instructional leadership in schools, as shown in Figure 2.



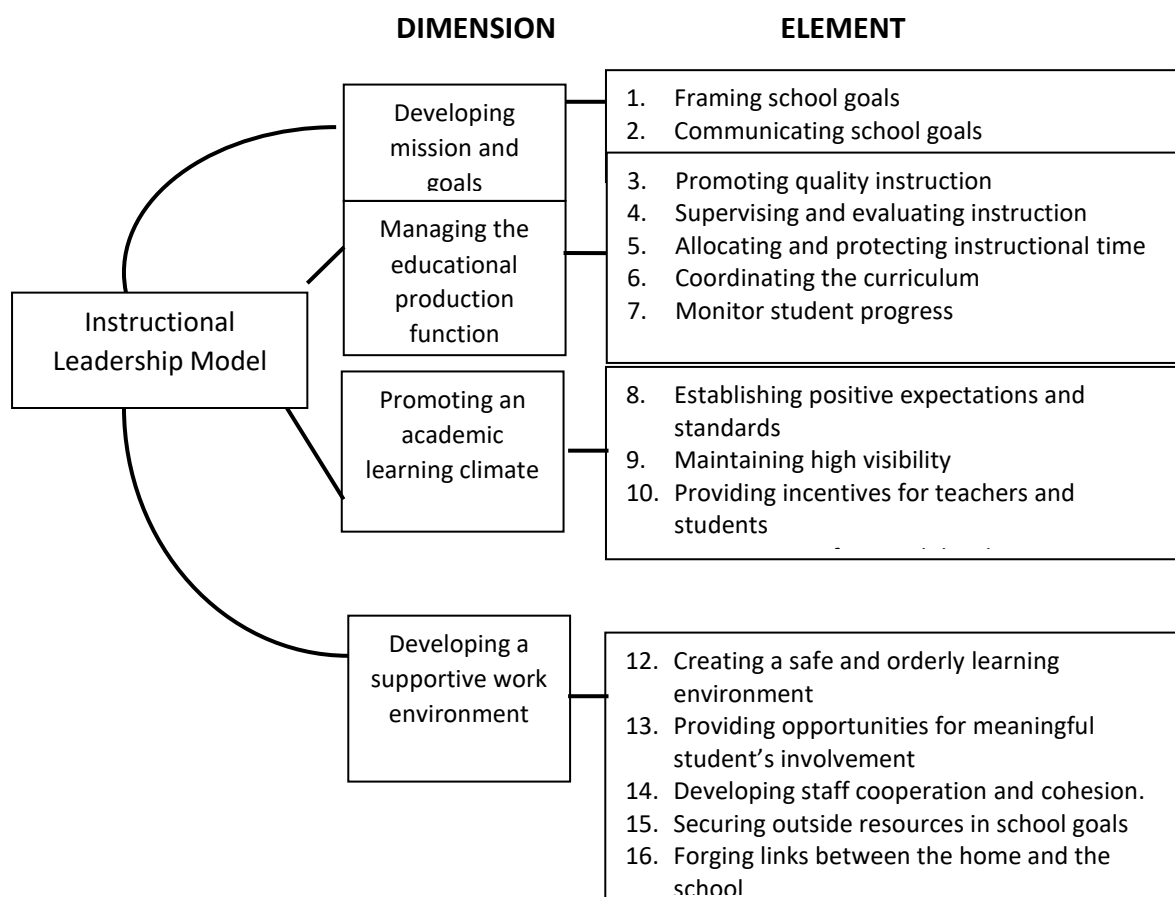
*Diagram 2 Instructional Leadership Model by Hallinger & Murphy (1985)*

The three (3) dimensions are defining school goals, managing instructional programmes, and creating a positive school climate. The first dimension, defining school goals, has two (2) elements: the practise of formulating clear school goals and communicating school goals. The second dimension, managing the instructional programme, has three (3) elements: the practise of supervising and evaluating instruction, coordinating the curriculum, and monitoring student development. The third dimension, on the other hand, has six (6) elements, which are the practise of protecting instructional time, promoting the development of professionalism, always being visible, setting academic standards, providing incentives to students, and providing incentives to teachers.

According to Zakaria Othman (2018), Hallinger and Murphy have produced a principal role model. This model is a combination of principals' policies, practises, and behaviours built on the basis of the Principal Instructional Management Rating Scale (PIMRS).

### **Murphy's Model (1990)**

Murphy's model, called Murphy's Comprehensive Instructional Leadership Framework (1990), was produced systematically and comprehensively. The production of this model is based on a synthesis obtained from Murphy's study of effective schools and school improvement. Figure 3 shows Murphy's Instructional Leadership Model (1990), which is divided into four dimensions.



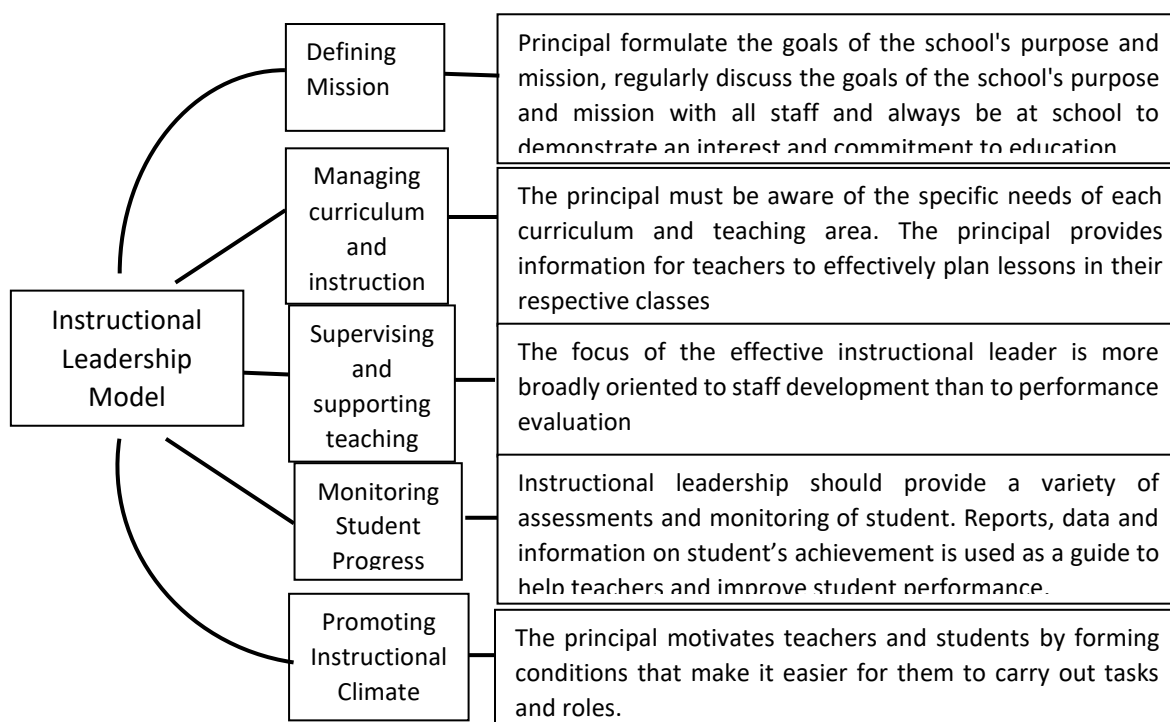
*Diagram 3 Instructional Leadership Model by Murphy (1990)*

Figure 3 shows the instructional leadership model developed by Murphy (1990). Murphy's model consists of four (4) dimensions and is divided into sixteen (16) roles or elements. The four (4) dimensions are: building mission and goals; managing the function of educational products; creating an academic learning climate; and developing and supporting the work environment. Like Hallinger and Murphy's Model (1985), the first dimension of Murphy's Model, which is building mission and goals, also has two (2) elements, which are defining school goals and spreading school goals. The second dimension, which is managing the function of educational products, has five (5) elements, namely creating quality teaching, monitoring and evaluating teaching, allocating and controlling teaching time, coordinating the curriculum, and monitoring student development.

Creating an academic learning climate is the third dimension of Murphy's model, which consists of four (4) elements: setting positive and standard expectations, always being visible, providing incentives for teachers and students, and providing professional development. The fourth dimension, which is developing and supporting the work environment, includes four (4) elements: creating a safe and orderly learning environment, providing meaningful engagement opportunities for students, developing collaboration and staff cohesion, using external resources to support the school, and building relationships between schools and home.

**Krug's Model (1992)**

Krug's Model was built on the basis of the five-factor dimensions of teaching leadership behavior. The model proposed by Samuel E. Krug has a structure that can be maintained as easily as possible and accurately implemented. The explanation of the five dimensions performed by the principal is as follows:



*Diagram 4 Instructional Leadership Model by Krug (1992)*

As noted earlier, five constructs have been central to analysis of instructional leadership shown as figure 4, a) defining mission, b) managing curriculum and instruction, c) supervising and supporting teaching, d) monitoring student progress, and e) promoting instructional climate. The first element of the dimensions of the Krug's model is to define the mission. Defining the goals, objectives and mission of the school is the principal's main role. The process of determining the mission is able to consider how a school can lead education by setting several criteria for evaluation in the form of success can be achieved.

The second dimension of Krug's model is managing curriculum and instruction. The principal should provide effective planning to teachers and always support curriculum development. Principals should have a broad knowledge of the provision of teacher and staff resources in order to effectively carry out the mission of the school. Third, Supervise and support teaching. Effective instructional leaders should be prospective rather than retrospective. In addition to being mandated, effective principals will be more lead-oriented to the development of teachers and students. Principals focus on what they can do, not just what they can do. Next, monitoring the progress of students should be made by the principal to achieve the mission of the school. High competitiveness makes principals need to be sensitive in making assessment in various ways. Lastly, promoting instructional climate. Motivating teachers and pupils to do what needs to be done will be the main objective of the



principal's role. Working towards the same goal will make it easier for the team. Learning will be more interesting and easier for students.

### McEwan's Model (2003)

Elain K. McEwan put forward a comprehensive model of effective instructional leadership, drawing on her research and personal experience as a successful principal. Her proposal consists of seven key steps, which are as follows:

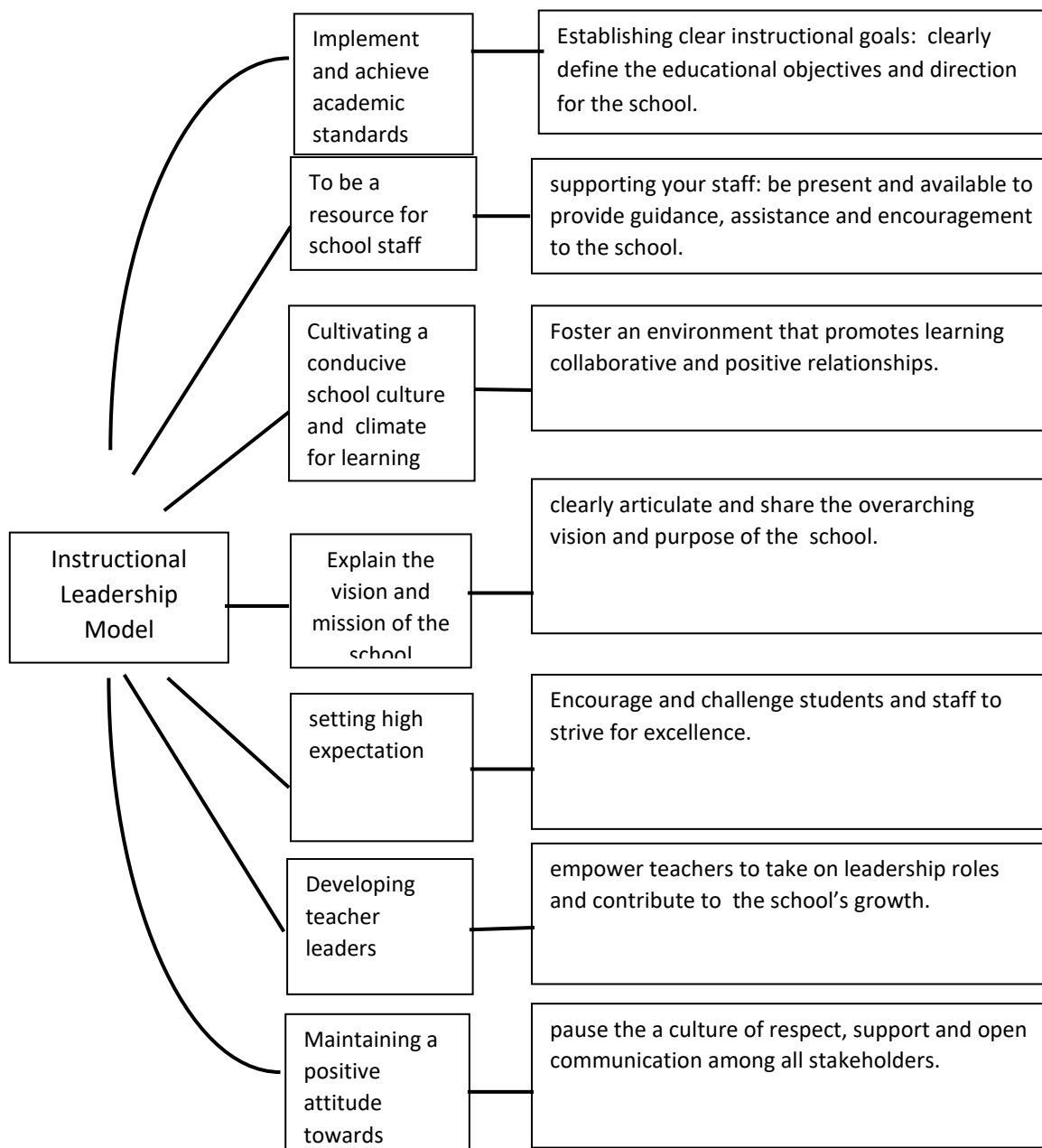


Diagram 5 Instructional Leadership Model by McEwan (2003)

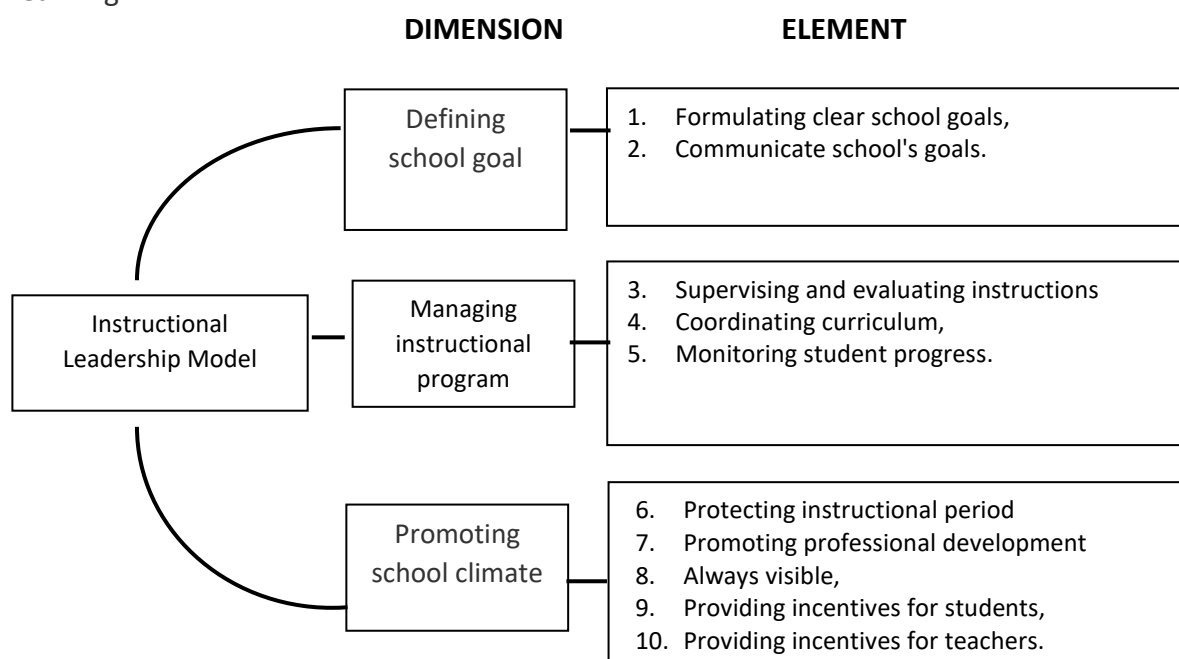
By implementing these seven steps, educational leaders can enhance instructional leadership and contribute to the overall success and growth of their schools.



### Hallinger's Model (2011)

Hallinger (2011) outlines three dimensions and 10 functions in measuring instructional leadership, namely defining school goals, managing instructional programmes, and promoting school climate. The three dimensions also have 10 functions that describe in detail the roles or elements that need to be implemented by instructional leaders in schools. This leadership model is shown in Figure 6.

The first dimension, which is defining the school's goals, consists of two elements, namely framing and clarifying the school's goals. The second dimension is managing the instructional programme. This dimension consists of three elements: supervising and making instructional evaluations, coordinating the curriculum, and monitoring student progress. Encouraging school climate is the third dimension of Hallinger's (2011) model, which covers five elements: protecting instructional time, always being visible, providing incentives to teachers, encouraging professional development, and providing incentives to student learning.



*Diagram 6 Instructional Leadership Model by Hallinger (2011)*

All the dimensions and elements of the Hallinger (2011) model are similar to the Hallinger & Murphy (1985) model, but the element in the third dimension, which is setting academic standards, is dropped from the Hallinger (2011) model list. This means the Hallinger & Murphy (1985) model has three dimensions and eleven elements, while the Hallinger (2011) model has the same three dimensions but consists of ten similar elements.

### Comparison Between Instructional Leadership Models

The following tables 1 and 2 show the similarities and differences of dimensions and elements in the five instructional leadership models.

Table 1

*Dimensions in Instructional Leadership models*

No	Hallinger & Murphy's Model (1985)	Murphy's Model (1990)	Krug's Model (1996)	McEwan's Model (2003)	Hallinger's Model (2011)
1	Defining the School's Mission	Developing mission and goals	Defining Mission	Implement and achieve academic standards	Defining school goal
2	Managing the Instructional Program	Managing the educational production function	Managing curriculum and instruction	To be a resource for school staff	Managing instructional program
3	Developing a Positive School Learning Climate	Promoting an academic learning climate	Supervising and supporting teaching	Creating a school culture and climate conducive to learning	Promoting school climate
4		Developing supportive work environment	Monitoring Student Progress	Explain the vision and mission of the school	
5			Promoting Instructional Climate	Setting high expectations for staff personally	
6				Developing teacher leadership	
7				Develop and maintain a positive attitude towards students, staff and parents.	

Table 2

*Elements of Instructional Leadership Models*

No	Model/Element	Hallinger & Murphy's Model (1985)	Murphy's Model (1990)	Krug's Model (1996)	McEwan's Model (2003)	Hallinger's Model (2011)
1	Frame school goals	✓	✓	✓		✓
2	Communicate school goals	✓	✓	✓	✓	✓
3	Supervise and evaluate teaching	✓	✓			✓
4	Coordinating the curriculum	✓	✓	✓		✓

5	Monitor student progress	✓	✓	✓		✓
6	Control the teacher's teaching time	✓	✓			✓
7	Encourage professional development	✓	✓		✓	✓
8	Make sure to always be at school	✓	✓		✓	✓
9	Organize incentives for teachers	✓	✓			✓
10	Emphasis on academic excellence	✓	✓			
11	Provide incentives to students	✓	✓			✓
12	Promote quality teaching		✓			
13	Create a safe learning environment		✓			
14	Create space for student engagement		✓			
15	Build collaboration among staff		✓		✓	
16	Utilize external resources for school goals		✓			
17	Build relationships between school and home		✓		✓	
18	Provide teaching resources and support			✓		
19	Create a positive learning environment			✓	✓	
20	Monitor classroom practices to align with school mission			✓		
21	Be a model/ reference / lead learning / teaching resource				✓	

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Source: Zakaria Osman (2016)

The analysis found that all five models of instructional leadership have the same goal, namely the role of principals or headmasters in the process of improving the performance and well-being of students in school. Moreover, the use of the term in the elements of each instructional leadership model is different. However, it leads to the same purpose. For example, the term defining clear goals (Hallinger, 2011) carries a meaning similar developing mission and goals (Murphy, 1990). Can also be equated with defining the mission of the school (Krug, 1992), Defining the School's Mission (Hallinger & Murphy, 1985) and explaining the vision and mission of the school (McEwan, 2003). Based on the list of elements present in the five selected models, it is clearly visible the existence of similarities and differences. The difference is only in the new elements of the models that are intended to meet the existing model groupings.

### Conclusion

This concept paper has discussed the definition, theory or model of leadership related to instructional leadership. Based on the definition and study of the instructional model that was discussed, the instructional leadership by PGB is seen to be able to help school members achieve their goals, vision and mission. This success can be achieved through the activities and dimensions contained in the Instructional Leadership Model. Principals or head teachers

have a role to practice perfect instructional leadership practices in order to help teachers achieve teaching activities and commit to their duties. The dimension of instructional leadership practice is not only capable of stimulating motivated teachers in carrying out the responsibilities entrusted to them, but also capable of producing the potential of students in the field of curriculum and co-curriculum according to the guidelines outlined by the Malaysian Ministry of Education. Therefore, school leaders are actually able to develop Malaysia's education standards at the global level.

## References

- Alig-Mielcarek, J.M. (2003). A model of school success: Instructional leadership. *Academic press and student achievement*. Ph.D dissertation, Ohio State University.
- Aida Abd Rahman, (2021). Amalan Kepimpinan Instruksional dalam Menjana Pengetahuan Teknologi Pedagogi Kandungan (PTPK) di kalangan Guru. *Malaysian Journal of Social Sciences and Humanities*, 6(11), 148 - 158.
- Anselmus Dami, Z., Budi Wiyono, B., Imron, A., Burhanuddin, B., Supriyanto, A., & Daliman, M. (2022). Principal self-efficacy for instructional leadership in the perspective of principal strengthening training: work engagement, job satisfaction and motivation to leave. *Cogent Education*, 9(1), 1-18.
- Aziah Samichan, Jamal @ Nordin Yunus, Marinah Awang, & Sukor Beram. (2021). Perbandingan model kepemimpinan instruksional: Persepsi barat dan Malaysia. *Management Research Journal*, 10, 94-105.
- Dayangku Rodzianah Awangku Amin, & Mohd Izham Bin Mohd Hamzah. (2021). Tahap amalan kepemimpinan instruksional guru besar dan hubungannya dengan tahap komitmen guru. *Malaysian Journal of Social Sciences and Humanities*, 6(2), 135-151.
- Foong, D.C.Y & Mohd Khairuddin Abdullah. (2017). Analisis perbandingan kepemimpinan instruksional pengetua dan kepuasan kerja guru. *International Journal Of Education*, 2(5), 318-339.
- Hallinger, P., & Murphy, J. F. (1985). Assessing the instructional management behavior of Principals. *The Elementary School Journal*, 86(2), 217–247.
- Hallinger, P. (2005). Instructional Leadership and the School Principal: A Passing Fancy That Refuses to Fade Away. *Leadership and Policy in Schools*, 4, 221-239.
- Hallinger, P. (2011). A review of three decades of doctoral studies using the Principal Instructional Management Rating Scale: A lens on methodological progress in educational leadership. *Educational Administration Quarterly*, 47(2), 271–306.
- Iminza Zakaria, Jeffri Mat Yasim, Mohamed Yusoff Mohd Nor, & Bity Salwana Alias (2021). Pengaruh amalan kepemimpinan strategik pengetua terhadap kemenjadian murid. *Asean Comparative Education Research Journal On Islam And Civilization*, 4(2), 96-111.
- Irdayanti Mat Nashir. (2016). *Pembinaan konstruk dan model pengukuran kepemimpinan instruksional berinovatif dalam sistem politeknik*. (Tesis Doktor Falsafah). Universiti Pendidikan Sultan Idris, Perak.
- Jamelaa Bibi Abdullah. (2012). *Amalan kepemimpinan instruksional dan sikap dan sikap terhadap perubahan dalam kalangan pengetua sekolah menengah di Negeri Pahang*. (Tesis Doktor Falsafah). Universiti Kebangsaan Malaysia, Selangor.
- Jamelaa Bibi Abdullah, Sathiyabama Supramaniam, Noor Azzam Syah Mohamed & Hanifah Veerankutty, (2020). *Kepimpinan Instruksional Pemangkin Pembangunan Guru Melalui Instructional Coaching*. Bandar Enstek, Nilai: Institut Aminuddin Baki.

- Jeffri Mat Yasim, Azlin Norhaini Mansor, & Aida Hanim Ab Hamid. (2019). Kepimpinan instruksional abad ke-21 dan amalan komuniti pembelajaran profesional dalam kalangan guru besar di Malaysia. *Asean Comparative Education Research Journal On Islam And Civilization*, 3(2), 21-37.
- Kementerian Pendidikan Malaysia. (2013). Pelan Pembangunan Pendidikan Malaysia 2013 - 2025. In *KPM* <https://www.moe.gov.my/muat-turun/penerbitan-dan-jurnal/1818-pelan-pembangunan-pendidikan-2013-2025/file>
- Kementerian Pendidikan Malaysia. Pelan Pembangunan Pendidikan Malaysia 2013-2025. Kuala Lumpur; 2013.
- Kiral, E. (2020). Excellent Leadership Theory in Education. *Journal of Educational Leadership and Policy Studies*, 4(1), n1.
- Mat Rahimi Yusof. (2017). *Pembinaan model kepimpinan instruksional maya, pola komunikasi dan kompetensi pengajaran guru sekolah menengah di Malaysia*. (Tesis Doktor Falsafah). Universiti Malaysia Terengganu, Terengganu.
- Mohd Ekhwan Mohd Shukor, & Mahaliza Mansor. (2019). Kepimpinan instruksional: Ke arah pencapaian pembelajaran. In *4<sup>th</sup> Asia Pacific Conference On Educational Management And Leadership*, (pp. 694-700). Tanjong Malim: Universiti Pendidikan Sultan Idris.
- Mohd Yusri Ibrahim, & Aziz Amin. (2014). Model kepemimpinan pengajaran pengetua dan kompetensi pengajaran guru. *Juku: Jurnal Kurikulum & Pengajaran Asia Pasifik*, 2(1), 11-25.
- Murphy, J. (1990). Principal instructional leadership. *Advances in educational administration: Changing perspectives on the school*, 1(Part B), 163-200.
- Rashidah Othman, Mohd Izham Hamzah, & Mohamed Yusoff Mohd Nor, (2022). Amalan kepimpinan instruksional guru besar dan hubungannya dengan motivasi guru sekolah rendah. *Jurnal Dunia Pendidikan*, 4(1), 1-12.
- Rozila Md. Yusof., & Jamalul Lail Abdul Wahab. (2019). Kepimpinan instruksional pengetua dan hubungannya dengan komitmen guru di Sekolah Berprestasi Tinggi (SBT) di Daerah Seremban. *International Journal of Education*, 4(33), 107-121.
- Samsiah Si-Rajab, & Khalip Musa, (2019). Tahap amalan kepimpinan instruksional dalam kalangan pengetua sekolah menengah kebangsaan agama. *Jurnal Pengurusan Dan Kepimpinan Pendidikan*, 32(1), 1-15.
- Siti Hazirah Hamzah, & Mohd Izham Mohd Hamzah. (2021). Amalan Kepimpinan Instruksional Pengetua dan Hubungannya dengan Keberkesanan Pengajaran Guru. *Jurnal Dunia Pendidikan*, 3(3), 351-358.
- Sofiah Drahman & Bity Salwana Alias. (2020). Kepimpinan instruksional pemimpin sekolah dan kompetensi pengajaran guru. In *Proceedings Of The International Conference Of Future Education And Advances* 2020, (pp. 549-551). Bandar Baru Bangi: Malaysia Association of Research and Education for Educators.
- Weber, J. (1996). Leading the instructional program. In S. Smith & P. Piele (Eds.), *School Leadership*, (pp. 253-278). Clearinghouse of Educational Management. Eugene, Oregon
- Zaliza Md Yasin, & Mohd Izham Mohd Hamzah. (2018). Amalan kepimpinan instruksional pengetua dan hubungannya dengan komitmen guru di sekolah menengah Daerah Seremban, Negeri Sembilan. *Jurnal Pengurusan dan Kepimpinan Pendidikan*, 31(1), 25-44.

Zakaria Othman. (2016). *Kepimpinan instruksional guru besar di sekolah kurang murid*. (Tesis Doktor Falsafah). Universiti Malaya, Kuala Lumpur.