
EFFECT OF LEARNING CULTURE AND LEARNING MOTIVATION TOWARD LEARNING OUTCOMES OF CHEMISTRY STUDENTS

Wesly Hutabarat.

Department of Chemistry, FMIPA UNIMED

E-mail : barathuta@gmail.com

Abstract

This study is a causal research aimed to find out the effect of direct and indirect learning culture and learning motivation on student learning outcomes. The sample selected was 114 of chemistry student educations and basic science students of the academic year 2015. Data collected using questionnaires and classroom test. Student outcomes were found by conducting classroom test. The questionnaires were distributed to student samples to obtain data of culture learning and student motivation to learn. It was found that direct effect of the learning culture towards student motivation to learn was 30.3%, direct effect of learning culture on student outcomes was 31.9%, and direct effect of learning motivation on student outcomes was 33.3%. In addition, indirect effect of learning culture through learning motivation on student outcomes was 0.100 (10%). Total effect of learning culture and learning motivation toward student outcomes was 66.2%. It can be concluded that the culture of learning and student learning motivation provide a great impact on learning outcomes.

Keywords : Culture of learning, learning outcomes, motivation to learn

A. BACKGROUND OF THE STUDY

Organization researchers have long reported that the culture is the most important actions that can be carried out by organization leaders. Educational experts similarly reported that impact of school leadership on learning is mediated through environmental and school culture indirectly (Hallinger and Heck 1998).

Watson (2001) reminded us that if the culture does not fit with learning environment, it could affect student learning outcomes negatively. Fink and Resnick (2001) also stated that school principals responsible for maintaining good culture on teaching and learning in schools. A Closer look at the special relationship of a particular aspect of school culture for student learning was investigated, which identified three categories of schools based on student learning outcomes, they are 'Exemplary' schools, 'Recognized' schools and 'Acceptable' schools.

A number of researches and publications focused on the impact and effect of principal leaderships on school cultures and student learning outcomes. There was a strong evidence in the literatures suggest that school headmasters must comprehend the culture before change (Leithwood et al. 2001). In addition, Bulach (2001) stated that a

leader supposed to identify existing school culture before trying to change it. Leonard (1999) stated that school principals should examine the dynamics and complexity of the culture of the school when the values are compatible or conflicting with school culture based on predictable results. Mortimore (2001) reminded that we must focus on strengthening knowledge about the complex interaction between culture and schooling.

Lakomski (2001) examined the need to change culture of organizations in order to carry out organizational changes and concluded that there is a causal relationship between the role of leaders and organizational learning.

Identification of the problems

Based on classroom observations it was found that assessment of student learning outcomes was emphasized on student cognitive level regardless motivation learning and student culture. But the students are mainly influenced by various factors such as the culture of learning and motivation to learn. Therefore, it is necessary to study how far the influence of culture of learning and student motivation to learn can affect student outcomes.

B. RESEARCH PURPOSES

1. To determine the direct effect of culture of learning on student learning outcomes
2. To determine the direct effect of learning motivation on student learning outcomes
3. To determine the effect of indirect learning culture through motivation toward student learning outcomes

C. RESEARCH HYPOTHESIS

1. There is a direct influence of the culture of learning on student learning outcomes
2. There is a direct effect of learning motivation on student learning outcomes.
3. There is an indirect effect of learning culture through motivation toward student learning outcomes

D. CULTURAL RELATIONS AND LEARNING CLIMATES

Taylor and Williams (2001) argued that accountability through testing is a threat, so that the principal needs to work on a long-term goal to strengthen cultural learning environment. Fullan (2001) argued that the concept of the principal too limited to sustain school improvement. He promoted the idea that the principal function as an agent of change to transform teaching and learning culture of the school. Testimonies from principals who successfully demonstrated that focusing on the cultural development of the school as a learning environment is fundamental to improve teacher morale and student

achievement. Nomura (1999) suggested that principals need to understand the culture of their schools.

Reavis and Vinson et al. (1999) explored how a new principal at a high school historically showed low performance but bring a change in the school culture and how they affect student achievements. Kytile and Bogotch (2000) studied school reform efforts through 'reculturing', rather than 'restructuring', model. They found that real and lasting change was more easily achieved by first changing the school culture, not just by changing the structure of how schools operate and function. Principals who choose to lead not only manage but first of all have to understand the culture of the school. It is important to realize that culture is complex because it has a very unique and special works. When an organization clearly understands the goals of the organization, so as to find out why and what to do and who to serve culture so as to ensure all work well.

When the complex roles, values, attitudes, expectations, ideas and behaviors in an organization are not appropriate or congruent, then the culture will ensure that bad things will happen. Successful principals who understand the organizational culture plays an important role in developing a successful school.

Organizational culture and climate of the school was seen as a concept that overlaps (Miner, 1995). Hoy and Tarter et al. (1991) showed the difference between climate and culture, with a school or organizational climate as seen from the perspective of psychological and school culture viewed from the perspective of anthropology. Differences between school climate and culture were highlighted in the study of organizations. Often it is viewed as the behavior of climate, while culture is regarded as the values and norms of the school or organization (Hoy, 1990; Heck and Marcoulides, 1996).

Lunenburg and Ornstein (2004) described organizational climate as a total environmental quality within an organization and believe that the recent attention to the effectiveness of public schools and their culture more emphasis on the importance of climate.

E. LEADERSHIP ROLES

There is strong evidence of the importance of leadership in creating a good school (Freiberg, 1999; Blase and Kirby, 2000; Donaldson, 2001; Sergiovanni, 2001, Snowden and Gorton 2002). In the end, the relationships that shape school culture and climate is strongly influenced by the principal. In schools where achievement is high and where there is a clear sense of community, we found that the principal always makes a

difference (Boyer, 1983). Hallinger and Heck (1998) proposed that the principal does not directly affect student achievement, but indirectly effects school climates.

This perspective also indirectly occurs on newer models and more complex research school leaderships. Leadership is no longer proposed to have a direct influence on learning outcomes but have an influence indirectly through the effects of school organization and school culture.

Current research suggests that principal has an indirect effect on learning and mediated by their interactions with other people, events situational and organizational factors and school culture (Hallinger and Heck, 1998; Hoy and Tarter et al., 2006; Leithwood and Louis et al 2004).

Leithwood (1992) was known as the actor 'agents of change' and suggested that it had an impact on schools through the school culture transformation. Maslowki (2001) further stated that the relationship between leadership values and behaviors and culture of school and that the school different cultures can be identified with different consequences for student outcomes. Furthermore, research studies explored the indirect effects of school leadership on student outcomes and suggested that it related to the organization of educational leadership and school culture, which is linked in turn to student achievement.

McLean and Fairman et al (1988), in their work with the health dimension of the organization, believed that climate diagnosing or school health could be used to empower school leadership that exists and to identify priorities for improvement that needs to consider as the goal of school principals. Symbolic leadership is defined as the ability to understand and shape the culture of the school. A school principal who created a culture that promotes and encourages learning is very important in order to improve student achievement in schools (Freiberg, 1999, Sergiovanni, 2001). Successful leaders learned to look at their organizational environment "in a holistic manner. This is to describe what the concept of school culture offers principals. It gives them a broader framework for understanding difficult problems and complex relationships in schools. By deepening their understanding of school culture, these leaders will be better equipped to shape the values, beliefs and attitudes necessary to promote a stable learning environment and maintain student performances (Bossert and Dwyer et al. 1982).

The relationship between school culture and effective leaderships was supported by educational researches (Leithwood and Jantzi, 1990; Leithwood 1992; Hallinger and Heck, 1998; Freiberg, 1999; Sergiovanni 2001; Leithwood and Louis et al. 2004).

Research methods

The total of 114 of the sample was selected as a sample total of four classes of Chemistry student in academic year 2014/2015. Data was collected by distributing questionnaires of organizational culture and motivation to the student samples. Assessment of learning outcomes was carried out at the end of the semester to student samples

E. DATA ANALYSIS

Data were analyzed using SPSS version 21 and the results are shown in Table 1 below.

Table 1. Calculation of correlation Coefficients, normality test, homogeneity test, linearity test and path coefficients

NO.	Coefficient correlations	Normality test	Homogeneity test	Linearity test	Path coefficients
1.	$r_{12} = 0,303$	X_1 Asympt. Sig = 0,238	X_1 F = 48,55 Sig. = 0,000	$X_3X_1 = F = 27,78$ Sig = 0,000 < 0,005	$\beta_{21} = 0,303$
2.	$r_{13} = 0,420$	X_2 Asympt/ Sig. = 0,122	X_2 F = 48,34 Sig. = 0,000	$X_3X_2 = 24,252$ Sig.= 0.000 < 0,05	$\beta_{31} = 0,319$
3.	$r_{23} = 0,429$	X_3 Asynpt. Sig = 0,109	X_3 F = 57,84 Sig. = 0,000		$\beta_{32} = 0,333$

Based on the above calculation, it can be described the influence of culture learning and learning motivation to student outcomes are shown in the following diagram

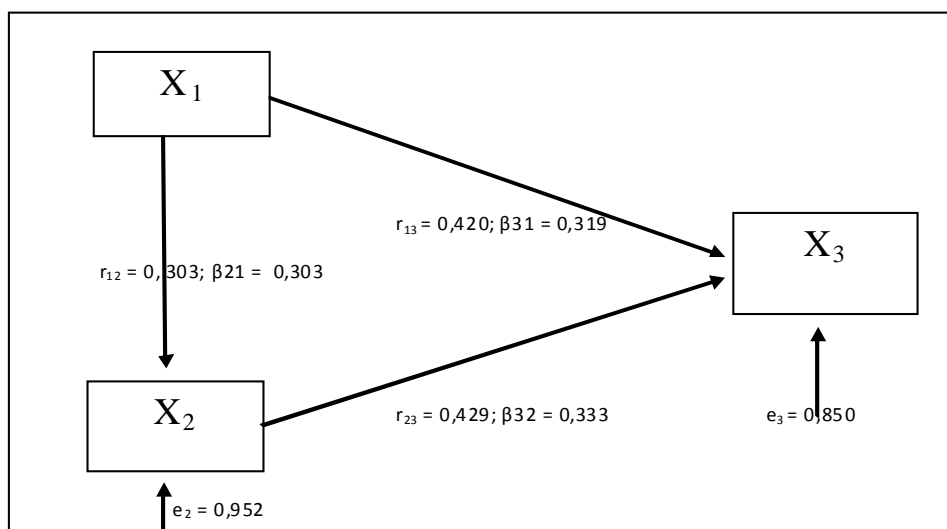


Figure 1. Diagram of Cultural of learning and learning motivation toward student outcomes

F. RESULTS

Based on the data analysis above, it was found that:

1. Direct effect of the learning culture towards student motivation to learn was 30.3%
2. Direct effect of learning culture on student outcomes was 31.9%
3. Direct effect of learning motivation on student outcomes was 33.3%
4. Indirect effect of learning culture through learning motivation on student outcomes was 0.100 (10%).
5. Total direct and indirect effects of learning culture and motivation toward student outcomes was 66.2%

G. CONCLUSIONS

Based on the above results it can be concluded that:

1. Culture of learning and student motivation to learn have an great impact on student learning outcomes.
2. Improved student learning outcomes are influenced by learning culture and student motivation to learn in addition to other factors that need to be investigated.

H. SUGGESTIONS

1. Lecturer needs to pay attention and learn and develop the culture in improving student learning outcomes.
2. Lecturer needs to develop student learning motivation in improving learning outcomes.

I. REFERENCES

1. Blase, J. and Kirby, P. C. (2000) *Bringing Out the Best in Teachers: What Effective Principals Do* (Thousand Oaks, CA: Corwin Press).
2. Bossert, S., Dwyer, D., Rowan, B. and Lee, G. V. (1982) The instructional role of the principal. *Educational Administrative Quarterly*, 18(3), 34–64.
3. Boyer, E. (1983) *High School: A Report on Secondary Education in America* (New York: Harper and Row).
4. Bulach, C. R. (2001) A 4-step process for identifying and reshaping school culture. *Principal Leadership*, 1(8), 48–51.
5. Donaldson, G. A., Jr (2001) *Cultivating Leadership in Schools: Connecting People, Purpose, and Practice* (New York: Teachers College Press).
6. Fairman, M. and McLean, L. (2003) *Enhancing Leadership Effectiveness* (Lenexa, KS: Joshua Publishing)
7. Fink, E. and Resnick, L. B. (2001) Developing principals as instructional leaders. *Phi Delta Kappan*, 82, 598–606.

8. Freiberg, H. J. (1999) *School Climate: Measuring, Improving and Sustaining Healthy Learning Environments* (Philadelphia, PA: Jossey Bass).
9. Fullan, M. (2001) *Leading in a Culture of Change* (San Francisco, CA: Jossey Bass).
10. Hallinger, P. and Heck, R. H. (1998) Exploring the principal's contribution to school effectiveness: 1980–1995. *School Effectiveness and School Improvement*, 9(2), 157–191.
11. Heck, R. H. and Marcoulides, G. A. (1996) School culture and performance: testing the invariance of an organizational model. *School Effectiveness and School Improvement*, 7(1), 76–96.
12. Hoy, W., Tarter, J.C. and Kottkamp, B. (1991) *Open School/Healthy Schools: Measuring Organizational Climate* (London: Sage).
13. Hoy, W., Tarter, C. and Hoy, A. (2006). Academic optimism of schools: a force for student achievement. *American Educational Research Journal*, 43(3), 425–446.
- Johnstone, W. (1988) *Organization health instrument*. Technical manual.
14. Kytle, A. W. and Bogotch, I. E. (2000) Measuring reculturing in national reform models. *Journal of School Principalship*, 10, 131–157.
15. Lakomski, G. (2001) Organizational change, leadership and learning: culture as cognitive process. *International Journal of Educational Management*, 15(2), 68–77.
16. Leithwood, K. and Jantzi, D. (1990) Transformational leadership: how principals can help reform school cultures. *School Effectiveness and School Improvement*, 1(4), 249–280.
17. Leithwood, K. (1992) The move to transform leadership. *Educational Leadership*, 49(5), 8–12.
18. Leithwood, K., Louis, K., Anderson, S. and Wahlstrom, K. (2004). *How leadership influences student learning* (New York: The Wallace Foundation).
19. Leonard, P. (1999) Understanding the dimensions of school culture: value orientations and value conflicts. *Journal of Educational Administration and Foundations*, 13(2), 27–53.
20. Lunenburg, F. C. and Ornstein, A. C. (2004) *Educational Administration: Concepts and Practices*, 4th edn (Belmont, CA: Wadsworth/Thomson Learning).
21. Maslowski, R. (2001) *School Culture and School Performance: An Explorative Study into the Organizational Culture of Secondary Schools and their Effects* (Enschede, The Netherlands: Twente University Press).

22. McLean L., Fairman, M. and Moore, B. (2006) A system approach to charting a path to quality and achievement. Report no. 1 to the The Council of Chief School Officer's (Successful Practices Series). Assessment of Academic Skills and school climate. Dissertation Abstracts International, AAT 3008 148 1 (Doctoral dissertation, The University of Houston).
23. Miner, J. B. (1995) Administration and Management Theory (Brookfield, VT: Ashgate).
24. Mortimore, P. (2001) Globalization, effectiveness and improvement. School Effectiveness and School Improvement, 12, 229–249.
25. Nomura, K. (1999) Learning to lead. Thrust for Educational Leadership, 29(2), 18–20.
26. Reavis, C. A., Vinson, D. and Fox, R. (1999) Importing a culture of success via a strong principal. Clearing House, 72, 199–202.
27. Sergiovanni, T. J. (2001) The Principalship: A Reflective Practice Perspective, 4th edn (Needham Heights, MD: Allyn and Bacon).
28. Snowden, P. T. and Gorton, R. A. (2002) School Principalship and Administration (New York: McGrawHill).
29. Sergiovanni, T. J. (2001) The Principalship: A Reflective Practice Perspective, 4th edn (Needham Heights, MD: Allyn and Bacon).
30. Taylor, R. T. and Williams, R. D. (2001) Accountability: threat or target? School Administrator, 58(6), 30–33.
31. Watson, N. (2001) Promising practices: what does it really take to make a difference? Education Canada, 40(4), 4–6.
32. Witziers, B., Bosker, R. and Kruger, M. (2003) Educational leadership and student achievement: The elusive search for an association. Educational Administration Quarterly, 39(3), 398–423.