The Role of the Leader in Utilising Intrinsic Motivation and Learning Analytics to Individualise Learning

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This paper will consider the role of the leader in creating a learning community that is accessible to all learners. Specifically, how Dubai Scholars Private School uses Intrinsic Motivation and Learning Analytics as essential tools, in the creation of an environment that fosters individualized learning, for each and every child.

The premise being that only when all learners in the community are equal and equitable, regardless of age, gender and intellectual ability, can leaders say that they truly are able to make difference.

The Background

All private schools in Dubai are inspected annually by Dubai School Inspection Bureau, and are judged against a standardized framework that highlights six standards (Authority, 2017). Although all standards are equally important, schools cannot move up a rating unless Standard Three, Teaching and Assessment for effective learning, moves up. The ratings are Outstanding, Very Good, Successful, Unsatisfactory and Weak.

The challenge for the school leadership team is how to move from a content driven "one size fits all" classroom approach, to an inquiry based approach where learning is individualized, given the resource and financial constraints of a very competitive Dubai context.

The assumption is that in order to improve student outcomes, approaches to classroom teaching needs to change. This in turn leads to a seismic shift in the culture of the organization.

Paramount in this shift is the role of school leadership and vision as well as the school's ability to accurately self-assess itself. "Very Good" to "Outstanding" schools are required to have a systematic and rigorous self-evaluation using both internal and external data. This self-evaluation must be embedded in the school's improvement planning and in its practices at all levels (Authority, 2017, p. 90).

Review of Research

The literature review for this paper looks at factors that differentiate outstanding schools from good schools. The review also looks at how intrinsic motivation contributes to collective teacher efficacy. Finally, how learning analytics and the role of the leader influences systemic school change.

Dougil, Raleigh, Blatchford and Fryer (2011) found that schools that go from 'Good to Outstanding', all have the same common traits and practices. They share a fundamental belief that all students can learn. Expectations are high with individualized support and inclusion (Hattie, Visible Learning, 2009).   School leadership is inspiring in providing a clear vision and direction. More importantly, outstanding schools know themselves well and evaluate their performance in a robust manner.   Outstanding schools have excellent teachers who have deep knowledge of their subjects and on how students learn (Clarke, Timperley, & Hattie, 2003). This includes excellent and innovative pedagogic practice as well as well an excellent ability to assess and evaluate. Outstanding schools have a systemic process for induction and continuing professional development of their faculty. These schools demonstrate a positive overall ethos and consistently promote community cohesion. (McGuigan & Hoy, 2006)

There is ample research on the use of intrinsic motivation on school improvement. For the most part this is the case, because a teacher's motivation to enter the profession is because it is safe, and personally fulfilling. While remuneration is a factor, for those entering teaching, it is not the paramount factor (Alexander, Chant, & C, 1994). There is substantial research suggesting that the teaching profession attracts men and women who desire "intrinsic rewards" and who approach teaching as a mission or calling. A clear relationship between teacher motivation and student motivation was also evident (Han & Yin, 2016). Specifically, students of autonomy-oriented teachers were more intrinsically motivated and had higher self-esteem than those teachers who were more control-oriented.

Michael Fullan's work on the role of the Principal makes a strong positive correlation between moral purpose and pivotal systemic school change (Fullan, 2003). Fullan examines the moral purpose of school leadership and its critical role in "changing the context" in which the role is embedded. Fullan concludes that school leaders not only become agents but also beneficiaries of the processes of school change.

John Hattie presented Collective Teacher Efficacy as the new number one influence related to student achievement (Hattie J. , 2018). Bandura (1993, 1997) first defined Collective Teacher Efficacy (CTE) as the shared belief of the group is in its ability to organize and execute a course of action required to produce attainment. Hoy, Sweetland and Smith (2002) further found that the strength of the CTE contributed to positive effects of individual teacher efficacy and vice versa. The stronger the collective teacher efficacy the more likely individual teachers were able to make more effective use of the skills that they already had.

Learning Analytics is defined as the measurement, collection, analysis and reporting of information about learners and their contexts for the purposes of understanding and optimizing learning (Myint, 2018). Although a relatively new concept in education, research shows that Learning Analytics has the potential to transform teaching and learning (Reyes, 2015; Gray, McGuiness, & Owend, 2016). For the purposes of this paper, research on Learning Analytics has been used to personalise learning through focused feedback, assignment and assessment design.

Supported by this research, the senior leadership team at Dubai Schools embarked on a process of school improvement. Focused leadership with a vision, intrinsic motivation and learning analytics became pivotal in the process towards systemic school change.

The Context

Dubai Scholars established in 1976, delivers a British Curriculum, to just over 1800 South Asian students, from Foundation stage to A levels. All teaching faculty is South Asian, and the school is headed by a Canadian Head of School. There are over 200 private schools in Dubai competing to educate the expatriate and local community. Dubai Scholars charges fees that would be considered to be in the affordable range.

The school's benchmarked international grade results, and O Level Board results continue to be at the very good to outstanding, year on year. Graduating students have gained acceptance to international universities all over the world. Countries include the UK, Europe, Canada, India, and the United States. Dubai Scholars graduates have prominent positions in major corporations and medical institutions.

The Process

In order to improve the school judgements in Teaching and Assessment for Effective Learning we had to find a way to change our traditional top down approach to teaching. We also had to ensure that our parent community understand why this shift was occurring.

To be fair, the process of changing this approach to teaching had already begun with the appointing of Early Years/Foundation and Primary Phase heads.

However, what was lacking was an overall total school, shared vision and direction, on how to take this forward.

At the same time, our governing body known as The Knowledge and Human Development Authority (KHDA) introduced an Inclusive Education Policy Framework of which the underlying tenet is the fostering of a culture of inclusion.

Compounding this, private school fee increases were frozen in 2018, which led to across the board budget reductions.

Within this context, this presentation, will look how the Senior Leadership Team creatively developed and utilized resources in order to achieve inclusive education.

The Journey

Almost all visitors to Dubai Scholars, including my first impressions, make the same comments. They notice the genuine love of learning and the infectious attitude of students.

Dubai Scholars students enjoy coming to school. They take pride in their learning and strive to achieve at the highest level.

Teachers are hardworking and take their profession seriously. The majority of teaching faculty are trained in India.   There is a mix of fresh recruits with a 2-year turnover, and a number of senior school staff who have been with the school for a significant amount of time. The style of teaching tends to be traditional as you move up the grades, delivering a prescribed content to the majority of the class.

The success of our school for the most part is because our students come to the school with solid verbal and reasoning skills. Students are expected to keep up, if they do not, they leave for a school which is less demanding.

Why the need for change?

The change had to occur because delivering content is not enough. In today's fast paced, technologically changing world, students can find their own content. In the age of Google, the goal of the school is to empower students with the ability to look at material they've never seen before and understand how to discern it appropriately. We wanted all of our students to be independent thinkers.

Key Stage 3 which includes years 7, 8 and 9, are preparatory years for Key Stage 4, where success is judged on rote learning, photographic memories and the ability to write under a time constraint. This type of system perpetuates an antiquated view of education. More importantly it was not inclusive of diverse learning styles and needs.

On the one hand it can produce academically brilliant students, but they tend to lack skills that made them employable. On the other hand, we lose students who although are academically competent, do not learn under this traditional method.

The answer was not to change the way our teachers taught, but to have them change the approach towards understanding how children learn so that we could become more inclusive and provide ample learning opportunities for students at both ends of the learning spectrum.

First, the articulation of a single vision that centers around the use of data to drive individualized learning. This vision was co-developed with the senior leadership team. The SLT then further co developed the vision with the middle leadership team. The vision began with helping teachers find their intrinsic motivation. All teaching staff were invited to form learning triads where they would develop theories of action. These theories of action connect the action of the teacher to the expected effect on students. As a triad, teachers themselves worked on how to improve instruction by observing each other's classes, even if it was for a few minutes. Where scheduling did not allow this, teachers would share video clips of lesson with the triad in order to illicit feedback.

Second, utilizing research to support the vision. Both SLT and MLT embarked on creating an online professional learning community where we shared and discussed classroom approaches that had maximum classroom impact. We utilized John Hattie's dial of impact as a guide to what approaches gave us the most visible learning (Hattie J. , Visible Learning, 2009). At our weekly professional development stay backs, both Senior and Middle leadership shared their learning and invited the teaching staff to further develop this research.

Third, all staff were encouraged to keep learning journals to track their progress so that their individual learning became visible. Journals were a way of showcasing their learning as well as to reflect on what worked and what did not. The journal allowed teachers to experiment risk free and the message was that it was ok if something did not work out. They were encouraged to write about this.

Fourth, triads worked without supervision from leadership. They were encouraged to share their findings if they desired. Over the course of the academic year, a number of teams came forward eager to showcase what they learned or found to be effective.

Fifth, at the beginning of our second year, all staff were introduced to Learning Analytics. In triads they triangulated their student's internal data, external assessment and Cat4 cognitive test scores. This was used to create individual alignments that accurately showed how each student was progressing relative their cognitive potential. Triads continued to use self-directed learning to research possible approaches to these misalignments in their classes. Teachers also used this data to discuss progress or lack of progress at Parent Teacher conferences.

Discussion and Next Steps

The combination of vision, intrinsic motivation and learning analytics allowed teachers to look at their classes not as a single unit, but as a collection of individual learners. As teachers became more confident in this approach, a number of changes were observable.

First, reflection and increased faculty development became common practice. Increased teacher knowledge about how their students perform and learn had an effect on the confidence level of students, as they now did not feel lost in class. Teachers felt safe in trying new approaches and were encouraged to take risks in their learning.

Second, an increased understanding that how children learn is just as important as delivering content. This had the effect of flattening the traditional school hierarchy, that the higher the grade the higher skill-set required. It became clear that high skill-set is required across all grades.

Third, teachers were able to quickly identify students who were at risk of poor performance at a very early stage. By using learning analytics to identify students who are likely to struggle in a particular field of study, teachers and heads of departments were better able to stream students to paths of success.

Fourth, increased reporting efficiency and optimization of assessments. Professionally, teachers were able to articulate in a clinical manner how each student was performing. Parents were able to see how their children were doing based in relation to their potential. There is now the beginning of a movement to look at our internal assessment practices based on the observations of some misalignments.

Finally, and most importantly, areas of systemic inequity became clear. Learning analytics showed us that at times we only taught to mainstream learners in the class, those whose learning was in sync with the teaching. Those out of sync struggled, left or had to work extra hard.

Conclusion

The use of intrinsic motivation and learning analytics has allowed our teachers to understand that their role is to create the conditions where every child is given the opportunity to learn. At the same time, understanding the incredibly important role they play in creating an equitable and inclusive classroom.

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What the research says

Creating Professional Learning Community through Teacher Triads and mentorship

Data Triangulation and Learning Analytics

First, reflection and increased faculty development became common practice. Increased teacher knowledge about how their students perform and learn had an effect on the confidence level of students, as they now did not feel lost in class. Teachers felt safe in trying new approaches and were encouraged to take risks in their learning.

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