

An organisational architecture to support personalised learning: Parent's perspectives on the academic advisers

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This article reports some of the findings from research conducted by the author, who was also the principal of Saint Stephen's College, a coeducational independent school in South-east Queensland. The school was in the early stages of transitioning to a new organisational architecture (the way the physical, digital and human resources are aligned) in order to personalise learning for students operating in a hybrid blended learning environment, when the research was conducted. The new architecture was seen as a way of positioning the school to thrive through an anticipated period of disruption caused by rapidly emerging digital technologies. The focus of the paper is on parent's, Academic Adviser's and Heads of Year's perceptions of the school's Academic Adviser (AcAd) Program, which was an early step in the process of transitioning to the new architecture, designed to promote greater levels of student self-regulation and learning power. Data from parent and Academic Adviser surveys, and Heads of Year focus groups are reported here.

Introduction

Emerging educational digital technologies stretch our understanding of what is possible and, in so doing, establish a new set of aspirations for educators, parents and students. Adaptive learning programs in subjects such as mathematics are already shaping and reshaping the learning process to meet the needs of the learner, not the instructor/teacher (Atkins, et al., 2010; Carroll & Foster, 2009; Christensen, Horn & Johnson, 2011; Green, Facer, Rudd, Dillon & Humphreys, 2005; Hannon, Patton & Temberley, 2011; KnowledgeWorks & Saveri Consulting, 2012; Murgatroyd, 2010; Prince, Saveri & Swanson, 2015; Long & Siemens, 2011). The algorithms that drive the adaption may soon be employed by the designers of learning management systems (LMS), transforming them from being largely warehouses of content to enabling self-paced learning programs that can be synchronised to the pace of the individual student, rather than the class group. Analytics written into some of their programs already provide data from embedded assessment to continuously profile the learner (Observatory of Educational Innovation, 2014).

In the meantime, massive open online courses (MOOCs) and online learning centres, such as the Khan Academy, that unshackle the student from the classroom teacher, have an expanding market that already encompasses millions of learners worldwide (Anderson & McGreal, 2012; Murphy, Gallaher, Krumm, Mislevy & Hafter, 2014). Web 2.0 tools, in general, broke the bounds of the physical campus and enabled learners to communicate and collaborate with others from different time zones, cultures, ages and perspectives, while game based learning and virtual experiments/scenarios provide authentic learning in virtual environments (Lombardi, 2007; Papastergiou, 2009; Tuzun, Yilmaz-Soylu, Karakus, Inal & Kizilkaya, 2009). These technologies have made it possible for the

individual student to be placed at the centre of 21st century learning, yet the organisational architecture (the way that physical, digital and human resources are organised to achieve the goals of the organisation) of all but a few schools, continues to revolve around the work of the teacher, and fail to meet the unique needs of the individual student.

Though differentiated education has proven successful in some classrooms with master educators, *it has not been realized on a large scale across entire schools or districts*. In most cases, the traditional school system remains organized to provide a minimally adequate education to the largest number of students in the middle of the bell curve. (Bogden, 2014, p.3)

The area of focus for this research was on the school's attempt to engage with digital technologies that were threatening to disrupt the traditional model of schooling, by transitioning to a new organisational architecture that included *Academic Advisers* (AcAds) as part of a multi-dimensional educational team.

Key research question

The key research question which this study explored was:

In times which are characterised by disruptive innovation due to technological changes, what are the implications for the organisational architecture of schools?

This article reports a case study of one school's attempt to transform its organisational architecture from one designed to resource classroom teachers, to one that focuses on the needs of individual students, initially through the introduction of the *AcAd Program*. The AcAd program represented the first step towards developing a team of educational specialists to serve the needs of individual students in the case study school.

Supporting research questions

In investigating the key research question, the following supporting research questions were investigated.

1. What are the perceptions of students in the AcAd program, particularly in relation to the role of the AcAds and the impact of the program on their level of self-regulation and learning power?
2. What are the perceptions of the parents/caregivers of students in the AcAd program, particularly in relation to the role of the AcAd and the impact of the program on the student's level of self-regulation and learning power?
3. What are the perceptions of the AcAds, in relation to their membership of a student-focused team of educators?
4. What are the perceptions of Heads of Year, as members of the traditional school architecture with responsibility for pastoral care, about the AcAds and the AcAd program?

This paper's focus is on the second supporting research question, which relates to the perceptions of parents. Summaries of responses to the third and fourth supporting research questions are presented to further illustrate the findings and for purposes of triangulation. This article reports on parts of a mixed methods case study.

Rationale for the study

Integrating the rapidly expanding range of educational technologies, even at the transactional level, is seen as one of the challenges of the 21st century (Ashfari, Bakar, Wong, Samah & Fooi, 2009). The challenge increases in complexity when it involves digital technology as a catalyst for transformative changes in pedagogy and a genuine emphasis on personalised learning. Unfortunately, the record of change at both the transactional and transformative levels has been disappointing, despite the application of considerable physical and human resources to the task (Ashfari, et al., 2009; Bogden, 2014; Donnison, 2009; Gao, Choy, Wong & Wu, 2009; Harris, Mishra & Koehler, 2009; Hennessy, Ruthven & Brindley, 2005; Mishra & Koehler 2006; Murgatroyd, 2010; Staples, Pugach & Himes, 2005).

It is my contention that change has not occurred as originally envisaged because many researchers, policy makers and educational leaders have not taken into account the capacity constraints of individual teachers or schools that act as barriers to transactional change. Nor have they accounted for the deeper cultural and psychological factors that act as barriers to transformational change in schools (Bailey, Schneider & Vander Ark, 2013; Sugar, Crawley & Fine, 2004), that have for centuries relied on teachers to instruct students. The dominant change strategy has focused on teachers as the people responsible for the design and delivery of most academic and other support services in the current schooling model, yet many teachers are unsettled by the challenge presented by digital technologies in *their* classrooms [my emphasis] (Gao et al., 2009; Staples et al., 2005; Sugar et al., 2004). The continuing focus on teachers actually enables them to dictate the nature and pace of change, even though teachers will soon cease to control the gate to content knowledge (Bailey et al., 2013; Bell, 2011; Drexler, 2010), and analytics will challenge their place as the only avenue for assessment and feedback (Long & Siemens, 2011). Moreover, algorithms in digital programs will challenge their role as course designers and lesson planners (Observatory of Educational Innovation, 2014).

The role of the school-based educator will change from that of an instructor, controller, gatekeeper, arbitrator, sole assessor and judge, to that of facilitator, mentor, guide, advocate, organiser of knowledge and significant node in each student's network of educational content providers (Carroll & Foster, 2009; Drexler, 2010; Gerlic, 2010). Yet there is little evidence that educational leaders or researchers have stopped to question whether or not traditional classroom teachers are equipped to perform these new roles - the work of Hannon et al. (2011) and Prince et al., (2015) are among the few notable exceptions. An adherence to the teacher-centric organisational architecture of yesterday's successful schools inhibits a school's ability to adapt, thereby exposing tomorrow's schools to the negative consequences of disruption (Christensen, 1997; Christensen, Horn

& Johnson, 2011; Hannon et al., 2011). Consequently, if educational leaders are to take full advantage of emerging technologies they will need to redesign their schools, shifting their focus from the work of the teacher to the needs of the individual student as he or she operates in a technology-rich blended learning environment (Bogden, 2014), supported by a team of specialist educators that extends beyond the classroom teacher.

An explosion of innovation has been transforming how we think about learning and how we organize talent and resources for learning experiences and has effectively unbundled “school” as we knew it. The tightly bound relationships and resource flows that used to deliver instruction, develop curriculum, perform assessment, grant credentials, and provide professional development are dissolving. Teaching and learning have become uncoupled from traditional educational institutions and are now available through and enhanced by a vibrant learning ecosystem (Knowledgeworks & Saveri Consulting, 2012, p. 2)

Schools cannot aspire to become technology rich, personalised learning communities while adhering to a dysfunctional 19th and 20th century organisational architecture.

Most architectures that exist today have been unconsciously put together in a haphazard fashion over the lifespan of the organization. Thus, initiatives conflict with each other in terms of goals and priorities, the same terms are inconsistently defined, and organizational direction appears fragmented and unfocused. It is as though we have been given many jigsaw puzzle pieces to assemble, but in the process of putting them together we discover that the pieces are from different jigsaw puzzles ... (Silverman, 1997, p. 1)

The digital technologies associated with changes in education reposition students, classroom teachers and other educators in the education supply chain. They disrupt existing practices and power structures, thereby necessitating a fresh organisational architecture (Christensen & Overdorff, 2000; Christensen, Craig & Hart, 2001; Christensen, 2002; Christensen et al., 2011; Hannon et al., 2011; Murgatroyd, 2010). Bogden (2014, p. 2) adds his voice to the call for change:

[But] the transformative potential of blended learning will only be realized when we employ education technologies to reshape teachers' and students' roles, and when technology is coupled with fundamental organizational changes that re-engineer legacy school structures, processes, and all forms of instructional delivery. We must take every opportunity to work more productively and meet the individual needs of each student.

This research focused on the first significant step in the development of a new organisational architecture through the introduction of an AcAd program, where specialist educators focus on working with students to strengthen aspects of their learning power and self-regulation, thereby reducing their dependence on classroom teachers.

Background and context for the case study

This study employed a case study approach focused on Saint Stephen's College, an independent, P-12, coeducational school in South-east Queensland, Australia. At the time of the study, the Years 7-12 component of the case study school was in the early stages of

transitioning from a traditional architecture that revolved around the work of the teacher to a new 'education team' architecture that focused on the needs of the individual student. I was the school's Principal/CEO (and researcher) who reported to a College Board and worked closely with an Executive. The management team for the secondary years, where the AcAd program operated, was divided into two groups; the Heads of Faculty and Subject Coordinators directly responsible to the Director of Studies for academic programs (course design, teacher performance, assessment, reporting and accountability) and Heads of Year who were responsible to the Dean of Students for student welfare and behaviour management. Teachers and teacher-aides reported to the Heads of Faculty, and teachers, the vast majority of whom were 'tutors' (homeroom teachers), who also reported to Heads of Year about low level pastoral issues.

The range of subjects offered, the amount of time given to each at particular year levels, the nature and timing of assessment as well as the quality of education 'in the classroom' was determined by the skills and availability of the teaching staff. Classrooms tended to be cocoons where small groups focused for finite amounts of time on particular topics housed within distinct subjects. The emphasis in class was on knowledge and skill acquisition, with application and consolidation exercises normally assigned as homework. The timetable, assessment schedules, length of the school day and the length of the school year (number of days in session) were a function of the capacity of teachers at the school, industrial agreements relating to the work of teachers and other staff, and other externally determined policies and regulations, many as mundane as timetables for school buses.

There were many other dimensions to the new architecture, including new learning facilities, the development of a data dashboard, the population of a new learning management system and a transition to blended learning. The school introduced its AcAd Program in 2014 in order to:

- a. Promote greater levels of self-regulation, the benefits of which were identified by Bell and Ackroyd (2006), Cleary and Zimmerman (2004) Greene and Azevedo, (2010), Pintrich and De Groot (1990), and Zimmerman (2002); and,
- b. Improve aspects of each student's 'learning power' and dispositions in order to provide them with benefits such as those identified by Crick, Haigney, Huang, Coburn and Goldspink (2013).

In a strategic sense, the AcAd program was designed to equip students with the skills and dispositions to be independent learners and clear the way for the introduction of other aspects of the new architecture, including reframing classroom teachers as 'subject coaches' and introducing classroom teachers to the notion that they form part of a specialist team of educators working in the service of students. It also took important steps towards personalising the learning experience for the students in the program.

The AcAd program was one dimension of a new organisational architecture for Year 7-12 students at the school. In 2016, there were 127 students (up from 96 in the previous year) who volunteered to be in the program out of a total of 700 eligible students (18% of the population). The AcAds themselves operated as contractors who invoiced the school each

fortnight for the meetings they conducted with their students. The cost of the program was shared by the school (which met 53% of the cost) and parents. Meetings between students and AcAds lasted for 30 minutes, but the AcAds were paid for an additional ten minutes for record keeping. Each student met with their AcAd on at least 14, but no more than 16, occasions during the academic year, which in practice meant one meeting each fortnight after students had settled into the year. AcAds were required to brief parents once each semester, although they were expected to obtain each student's permission before they shared confidential information with their parents. AcAds kept records of their meetings with students.

Each student's learning disposition was assessed at the beginning of the year using the self-assessed *Crick Learning for Resilient Agency Profile* (CLARA), which was the updated version of the *Effective Lifelong Learning Inventory* (ELLI), developed by Deakin Crick, Broadfoot and Claxton (2004) to assess learning dispositions, and each student from Years 9-12 completed the self-assessed *Learning and Studies Strategy Inventory for High School Students* (LASSI-HS) developed by Weinstein, Zimmerman and Palmer (1988) to gauge their level of self-regulation. AcAds used these data to guide their conversations with students and focus on the dimension(s) that, in the opinion of the AcAd and the student, would render the student the greatest benefit.

The research was designed to assess the AcAd program's effectiveness in preparing students to operate in the new organisational architecture. The perspective of parents was considered vital to the success of the overall program. Their support was required to encourage their children who were participating in the program, fund part of the cost of the program, and work collaboratively with the AcAds to promote greater levels of self-regulation and learning power by their child.

Profiling students in the AcAd program

Data from the CLARA ('Crick Learning for Resilient Agency') instrument completed early in 2015 (Deakin Crick, Huang, Shafi & Goldspink, 2015) quantifies each participating student's assessment of their learning dispositions (consisting of Mindful agency, Sense making, Creativity, Curiosity, Belonging, Collaboration, and Hope and optimism). Deakin Crick and her colleagues (Buckingham-Schum & Deakin Crick, 2012) argued that each of these dimensions contribute to the learner's ability to function effectively in their particular learning environment. Table 1 provides a profile of the survey results for the group of students participating in the research.

Table 1: Mean scores for a group of 36 Year 7-12 students participating in the research where the scale ranges from 0 (extremely weak) to 5 (extremely strong)

CLARA element	Belonging	Collab-oration	Hope and optimism	Mindful agency	Sense making	Creativity	Curiosity
Mean score	4.09	3.46	3.73	3.03	3.78	2.43	2.54

'On average', the students had a strong sense of belonging, but were weak in creativity and curiosity. This could be attributed to the strong pastoral care program at the school, strong dependence on classroom teachers, and an unstructured approach to the teaching of creativity. The AcAd program was intended to dilute the level of dependence while maintaining the strong sense of belonging. The teaching of creativity was not in the AcAds' brief, although there may have been some gains associated with increased levels of self-efficacy (an interesting area for future research).

The LASSI-HS instrument was completed by students in Years 9-12 who were in the AcAd program. It was a self-administered inventory that scored students in the ten dimensions, as listed in Table 2. Students and their AcAds were instructed to initially focus on those dimensions with scores below the 50th percentile, before moving on to scores between the 50th and 75th percentile, provided the students thought the feedback from the instruments was a true reflection of their strengths and weaknesses.

Table 2: Summary of results from the initial round of LASSI-HS.

LASSI-HS Dimensions	% below 50th percentile	% between 50th and 75th percentile	% above 75th percentile
Anxiety	52	24	24
Attitude	28	48	24
Concentration	43	33	24
Information processing	29	33	38
Motivation	19	43	38
Self-testing	38	33	29
Selecting main ideas	38	33	29
Study aids	43	24	33
Time management	29	38	33
Task strategies	48	29	24
Note: Student scores are grouped into three percentile categories. 21 Year 9+ students agreed to participate.			

Data from the initial round of LASSI-HS indicated that the majority (52%) of students who provided their data needed to address anxiety as an issue that may have negatively impacted on their learning. A significant minority of students, taken to be more than 33% of participants, needed to address issues relating to concentration, self-testing, selecting main ideas, study aids and task strategies in order to improve their learning. The group's data indicated relative strengths in information processing and motivation.

Methods

A case study approach was chosen in order to capture the meaning of complex phenomena, in context, using a variety of data sources (Baxter & Jack, 2008). Case study is accepted as a common form of research (Ravenswood, 2011). This study was phenomenological in nature, and sought to understand the dynamics in the context of that school setting. It also allowed for various perspectives to be captured.

Baxter and Jack (2008) also identified various forms of case study. This study is best described using Stake's (1995) classification as a single 'intrinsic' case:

... researchers who have a genuine interest in the case should use this approach when the intent is to better understand the case. It is not undertaken primarily because the case represents other cases or because it illustrates a particular trait or problem, but because in all its particularity and ordinariness, the case itself is of interest. The purpose is NOT to come to understand some abstract construct or generic phenomenon. The purpose is NOT to build theory. (Baxter & Jack, 2008, p. 548; emphasis in original)

Flyvbjerg (2006, p. 224) added his support for the case study approach, noting:

Social science has not succeeded in producing general, context-independent theory and, thus, has in the final instance nothing else to offer than concrete, context-dependent knowledge. And the case study is especially well suited to produce this knowledge.

Baxter and Jack (2008) and Ravenswood (2011) noted that case studies can employ multiple data sources, including interviews, documentation and quantitative survey data, which they describe as a unique feature of this approach. They also pointed out that these data can be converged in the analysis process, rather than dealt with in isolation, in a manner that treats each set of data as if it were a piece in a puzzle.

According to Taylor (2007), it is impossible to generalise from a single case study, although Flyvbjerg (2006) disagreed. This research was not intended to provide findings or make recommendations that could be generalised across all, many or even some schools. I took the view that each school is unique in terms of culture, and even the context within one school can vary as different people interact in differing circumstances. However, this research was intended to identify certain threads, which Bassey (1999, 2001) would term 'fuzzy' generalisations, that educational leaders might consider familiar and worthy of exploration in their own school.

Various forms of quantitative and qualitative data were collected over a two-year period. All students in the program in 2015 and their parents/caregivers were invited to participate, via a letter explaining the ethics associated with the research, attached to a hard-copy survey containing closed and open-ended questions. The research complied with Griffith University's *Code for the Responsible Conduct of Research* and the Chair of the Saint Stephen's College Board approved the use of the school's name in this article. Completed surveys from 33 parents/caregivers, chosen by a third party from the list of people who agreed to participate, were analysed. AcAds were invited to participate in the research by completing a survey containing closed and open-ended questions when they had been in the program for at least one semester. This resulted in completed surveys from ten AcAds between 2015 and 2017. The six Heads of Year were invited to participate in a semi-structured focus group in late 2016.

Participating students completed a survey consisting of both closed and open-ended questions, which were completed in school time through the school's LMS in 2015. Data collected from participating students are not included in this article as they are extensive

and will form the focus of a subsequent paper. However, it is worth noting that data from all sources were strongly correlated.

As noted previously, qualitative data formed the bulk of the data employed in the research. *MS Word* document files captured elaborations to survey statements and responses to open-ended survey questions. I read the documents to identify a set of themes. It became apparent that these themes were in accord with themes I identified in the work of Cleary and Zimmerman (2004) and Deakin Crick, Bradfoot and Claxton (2004). A set of draft codes was developed, and the documents were read again and coded using the draft list. The codes were analysed and grouped together under the set of themes. The themes remained stable, but the list of codes was modified throughout the analysis process.

Thematic analysis is a foundational method, often employed by qualitative researchers to identify, analyse and report patterns in interview generated data (Braun & Clarke, 2006). Thematic analysis allows the researcher to combine an analysis of the meaning of data within their context (Vaismoradi, Turunen & Bondas, 2013). This approach was preferred to content analysis because I wished to capture the underlying richness of stakeholders' experiences. I was interested in the significance of themes across the entire data set because the study aimed to assess the impact of the AcAd Program on a group of student participants' self-regulation and learning power and the perceptions of other key stakeholders. The analysis was theoretical rather than inductive, because it was 'driven by the researcher's theoretical or analytic interest in the area' (Braun & Clarke, 2006, p. 84). In other words, the codes were linked to specific research questions. My approach was semantic in that examination of data focused on what the stakeholders said or wrote explicitly.

Results of the parent survey

Parents of all ninety-seven students in the AcAd program were invited to complete a survey in June 2015 (the mid-way point in the academic year). Thirty-three responses were received and the data from the surveys are summarised in Table 3. The survey questions included fourteen closed-ended questions, where respondents were asked to employ a five point Likert scale (5 for 'strongly agree', to 1 for 'strongly disagree'). Respondents were invited to elaborate on their quantified answers and to respond to a set of open-ended questions in writing.

The survey responses from parents indicate a high level of parent support for the program. As a group they believe their child/children were benefiting beyond their time at school and they generally supported the contention that the program was improving their child/children's self-regulation. They also believed their children had a positive attitude to the program, and this perception was in accord with data collected from the students themselves. As a group of fee paying parents they believe the program represented good value for money. There did not appear to be much discussion about what students discussed with their AcAds when the students returned home. This was not necessarily

Table 3: Responses from the survey of parents with students in the AcAd program
(Likert scale, strongly disagree = 1 to strongly agree = 5)

	Questions	Mean score
1	I believe the AcAd program is benefiting my child.	4.59
2	My child is generally positive about the program.	4.56
3	I personally support the program.	4.83
4	I believe the program is leading to improvements in my child's self-regulation (ability to determine how best to learn).	4.44
5	I believe my child is coming to understand that they do not need to rely exclusively on their classroom teachers in order to learn.	4.22
6	My child has established clear academic goals.	4.35
7	My child's level of self-confidence is increasing as a result of the program.	4.11
8	My child has written down his or her goals.	4.18
9	My child refers to his or her goals when we discuss what they are doing at school.	3.75
10	I believe the AcAd program is strengthening my child's capacity to learn.	4.47
11	I believe the program represents good value for money.	4.69
12	I see evidence that my child is expanding his or her learning network.	3.97
13	I believe my child was already self-regulating before the AcAd program began. (NB: A lower score indicates the program is filling a gap.)	3.01
14	The knowledge, skills and attitudes being covered in the program will assist my child in their life beyond school.	4.67

considered a problem as an increased flow of communication home may have led to well-intentioned parents artificially shaping subsequent interactions between students and their AcAds, and the success of the program relied on students presenting their own views in their meetings with their AcAds and taking ownership of the process.

Summary of responses from open-ended questions in the parent survey

The parent survey included the following questions. Every parent who completed the survey provided at least one response, and all but a few responded to all questions. Answers were analysed to identify significant themes.

Q1: What is the most common area of focus when you and your child have discussions about their learning?

Planning and organisation issues were cited twice as often by parents, followed by setting and achieving goals and other issues relating to motivation. These responses were triangulated with responses received from the student surveys, data gathered from student focus groups, and individual student interviews, which have not been reported here.

Q2: What suggestions do you have to improve the AcAd program?

Most parents stated they were happy with the program and had no suggestions to make (e.g. 'I think the program is brilliant. I couldn't think of any way to improve it'), but a number stated they wanted more communication between the AcAd and home (e.g. 'Weekly meetings with parents, sharing of study techniques being used'). There was also a

comment about needing to get the right fit between the AcAd and the student, although that same parent did not have a complaint in this regard ('Ensure a personality fit between child and advisers – we have been extremely fortunate'). Clearly, the relationship between the AcAd and the student was considered important.

Q3: In what way does the role of the AcAd differ from the role of the teacher?

Parents appeared to have a clear understanding of the different role of the AcAd. The majority of comments identified the AcAd as a mentor who focused on developing skills and attitudes that extended beyond subject boundaries. A number highlighted the benefits of the program with regard to developing habits for lifelong learning.

Q4: What types of behaviours would you expect your child to exhibit at the conclusion of the AcAd program?

The majority of comments from parents identified improved techniques and strategies as being of potential benefit to their children after they have left school. The large number of references to greater independence and self-regulation suggested they had understood the purpose of the program and appreciated the need to promote these qualities in their children. They also believed that the program would assist their children to be more resilient and better able to cope with the challenges that awaited them. Relatively few expected their child would become more flexible/adaptable or develop broader learning networks.

The frequency with which the various themes were represented in data from the 2015 parent/caregiver survey is shown in Figure 1.

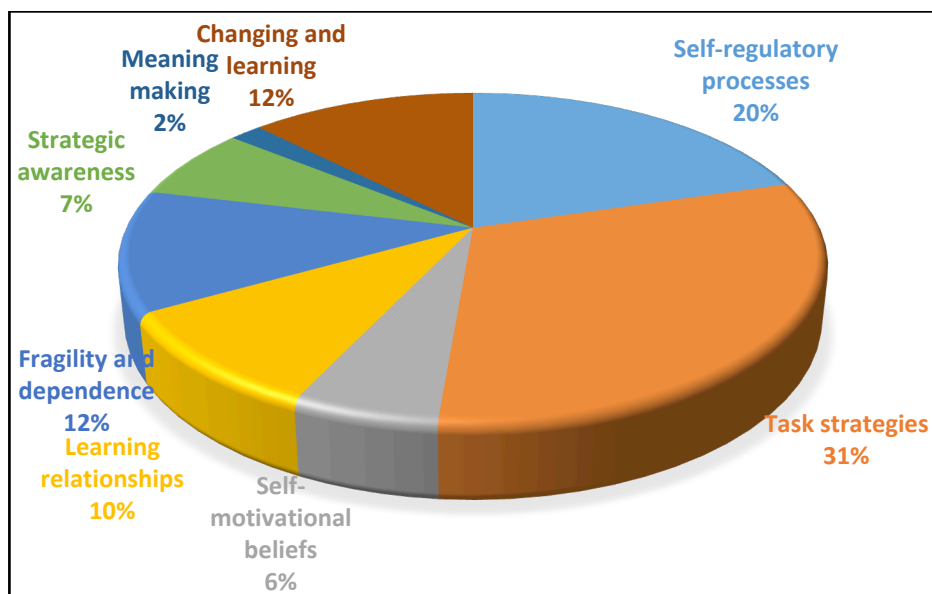


Figure 1: Relative frequency with which the various themes appeared in parent data obtained from the 2015 survey

Parents/caregivers tended to focus on task strategies significantly more than on any other theme, with time management and organisational skills frequently highlighted by parents/caregivers. Parents/caregivers were also concerned about aspects of changing and learning, and fragility and dependence, where their major concern was their child's ability to manage stress and anxiety – which, they perceived, were helped by the program. Strategic awareness and self-motivational beliefs were less of a concern, although the reader should note that self-efficacy was the only code employed to analyse the strategic awareness theme, which meant it ranked highly in the list of individual issues. There were data with relevance to meaning making, particularly with regard to the sense of satisfaction derived from making progress.

Data obtained from the AcAd survey complemented data gathered from parents/caregivers. Data from AcAds placed a similar emphasis on the various themes, as shown in Figure 2. They valued their relationships with their students in a way that mirrored the value placed on these relationships by parents/caregivers. They also noted the improvements in self-efficacy that had been acknowledged by parents/caregivers. They recognised that students' anxiety highlighted by parents/caregivers was real, but generally saw improvements in self-regulatory processes and task strategies as the ultimate solution to these concerns. Data from parents/caregivers accorded with the views of AcAds in this regard.

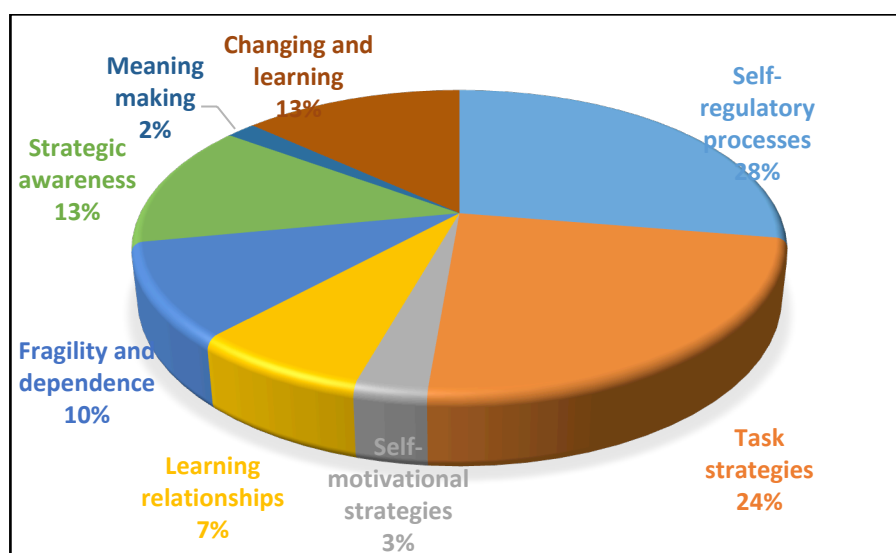


Figure 2: Relative frequency of themes from the 2015 AcAd survey

Qualitative data from the AcAd survey emphasised self-regulatory processes and task strategies over the other themes. Nonetheless, other themes should not be seen as less significant. Concerns about anxiety levels should not be under-estimated, and nor should the relief that parents/caregivers expressed when these levels of anxiety diminished during the course of the program.

Data collected from a focus group of Heads of Year confirmed that they were very supportive of the AcAd Program. Heads of Year noted improvements in the attitudes of some students, and pointed to examples where the AcAds had supported them in fostering the wellbeing of students in their care. They called for more frequent communication between them and the AcAds as a means of exchanging valuable information for the benefit of students.

Underlying the focus group conversations was a sense that the Heads of Year saw the AcAds as important members of the education team, who had the time and focus that they themselves lacked due to the nature of their work. Their preparedness to recognise the contribution of the AcAds, who were not officially members of the staff, indicated that they were focused on the welfare of students and not on lines of demarcation.

Limitations of the research

The case study focused on one school at a particular phase of its development. Each school has its own unique culture, so there is no guarantee that the success of the AcAd program will be replicated in another school. However, many of the issues identified by the AcAds may be common to other high school students, so the case study may be used to inform programs with similar goals.

My role as 'insider researcher' implied its own set of limitations. While it gave me access to data and an insight into the inner workings of the school that might not have been available to an outsider, it also meant that some of the responses obtained from stakeholders may have been skewed in a certain direction. The triangulation of these data helped minimise the impact, but it was not removed completely.

The reader is reminded that this article has reported on part of the overall research project. Data from the students in the program will be presented in a subsequent article.

Conclusion

Data presented provide an insight into the perceptions of parents of students in the AcAd program, the AcAds and Heads of Year. The parent survey indicated strong levels of parent support, but they wanted more communication between the AcAd and home. Parents demonstrated a clear understanding of the difference between the role of the classroom teacher and the role of the AcAd. They also acknowledged that the program was assisting their child to develop self-regulation and other strengths that would benefit them after they graduated from school. Parents in general indicated that the AcAd program provided personalised educational benefits for their child, and saw the AcAds as very effective members of the educational team.

AcAds saw themselves as members of the education team, whose contribution came in the form of one to one communication with their students. Their relationships with students were founded on the basis of trust. They focused on promoting higher levels of self-regulation and strengthening the learning power of students, which worked well when

students had the will to participate. They recognised the need to communicate with parents, but noted that some parents were not motivated to attend meetings. They pointed to many benefits from the program, and highlighted how levels of student anxiety had diminished as a result of better organisation and time management.

The School's Heads of Year were established members of staff, with responsibility for student well-being. The research indicated that they strongly supported the AcAd program. They identified benefits to students with respect to their confidence and general approach to school. They also indicated that they would welcome the opportunity for more contact with the AcAds, who they recognised as important members of the education team.

Call for further research

The AcAd program was designed to improve participating students' self-regulation and learning power, which was seen as particularly important for the vast majority of the school's graduates who transitioned to tertiary studies. It would be interesting to research the long-term impact of the program on students after they left the school environment. This could be accomplished through the collection of data about each student's performance at university.

Research into the effectiveness of the AcAd program forms one part of the total transition to a new organisational architecture for the school. Data on the development and use of the LMS, learning spaces and data dashboard as well as the effectiveness of other people in the education team will be collected, analysed and used to inform the plans of the leadership team over the coming years.

References

- Anderson, T. & McGreal, R. (2012). Disruptive pedagogies and technologies in universities. *Educational Technology & Society*, 15(4), 380-389.
<http://www.jstor.org/stable/jeductechsoci.15.4.380>
- Afshari, M., Bakar, K. A., Wong, S. L., Samah, B. A. & Foo, S. F. (2009). Factors affecting teachers' use of information and communication technology. *International Journal of Instruction*, 2(1), 77-104. http://www.e-iji.net/dosyalar/iji_2009_1_5.pdf
- Atkins, D., Bennett, J., Brown, J.S., Chopra, A., Dede, C., Fishman, B., ... Williams, B. (2010). *Transforming American education: Learning powered by technology*. U.S. Department of Education. <https://www.ed.gov/sites/default/files/NETP-2010-final-report.pdf>
- Bailey, J., Schneider, C. & Vander Ark, T. (2013). *Navigating the digital shift: Implementation strategies for blended and online learning*. Washington, DC: Digital Learning Now!
- Bassey, M. (1999). *Case study research in educational settings*. Philadelphia, PA: McGraw-Hill.
- Bassey, M. (2001). A solution to the problem of generalisation in educational research: Fuzzy prediction. *Oxford Review of Education*, 27(1), 5-22.
<https://doi.org/10.1080/03054980123773>

- Baxter, P. & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*, 13(4), 544-559.
<http://nsuworks.nova.edu/tqr/vol13/iss4/2/>
- Bell, P. D. & Akroyd, D. (2006). Can factors related to self-regulated learning predict learning achievement in undergraduate asynchronous web-based courses? *International Journal of Instructional Technology and Distance Learning*, 3(10), 5-16.
http://www.itdl.org/journal/oct_06/article01.htm
- Bell, F. (2011). Connectivism: Its place in theory-informed research and innovation in technology-enabled learning. *The International Review of Research in Open and Distributed Learning*, 12(3), 98-118.
<http://www.irrodl.org/index.php/irrodl/article/view/902/1664>
- Bogden, J. F. (2014). *Blended learning: Bringing personalized education to scale*. Arlington, VA: National Association of State Boards of Education. http://www.nasbe.org/wp-content/uploads/Blended-Learning-Discussion-Guide_7-09-14.pdf
- Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Buckingham Shum, S. & Deakin Crick, R. (2012). Learning dispositions and transferable competencies: Pedagogy, modelling and learning analytics. *Proceedings of the 2nd International Conference on Learning Analytics and Knowledge, Vancouver, Canada*.
<http://oro.open.ac.uk/32823/1/SBS-RDC-LAK12-ORO.pdf>
- Carroll, T. G. & Foster, E. (2009). *Learning teams: Creating what's next*. National Commission on Teaching and America's Future.
<https://nctaf.org/wp-content/uploads/2012/01/NCTAFLearningTeams408REG2.pdf>
- Christensen, C. M. (1997). *The innovator's dilemma: When new technologies cause great firms to fail*. Cambridge, MA: Harvard Business School Press. <https://hbr.org/product/the-innovators-dilemma-when-new-technologies-cause-great-firms-to-fail/1196XE-KND-ENG>
- Christensen, C. M. (2002). The opportunity and threat of disruptive technologies. *MRS Bulletin*, 27(4), 278-282. <https://doi.org/10.1557/mrs2002.81>
- Christensen, C. M., Craig, T. & Hart, S. (2001). The great disruption. *Foreign Affairs*, 80(2), 80-95. <https://doi.org/10.2307/20050066>
- Christensen, C. M., Horn, M. B. & Johnson, C. W. (2011). *Disrupting class: How disruptive innovation will change the way the world learns*. New York: McGraw-Hill.
- Christensen, C.M. & Overdorf, M. (2000). Meeting the challenge of disruptive change. *Harvard Business Review*, 78(2), 66-77.
<https://hbr.org/2000/03/meeting-the-challenge-of-disruptive-change>
- Cleary, T. J. & Zimmerman, B. J. (2004). Self-regulation empowerment program: A school-based program to enhance self-regulated and self-motivated cycles of student learning. *Psychology in the Schools*, 41(5), 537-550. <https://doi.org/10.1002/pits.10177>
- Deakin Crick, R., Broadfoot, P. & Claxton, G. (2004). Developing an effective lifelong learning inventory: The ELLI Project. *Assessment in Education: Principles, Policy & Practice*, 11(3), 247-272. <https://doi.org/10.1080/0969594042000304582>
- Deakin Crick, R., Haigney, D., Huang, S., Coburn, T. & Goldspink, C. (2013). Learning power in the workplace: The effective lifelong learning inventory and its reliability and validity and implications for learning and development. *The International Journal of Human Resource Management*, 24(11), 2255-2272.
<https://doi.org/10.1080/09585192.2012.725075>

- Deakin Crick, R., Huang, S., Shafi, A. A. & Goldspink, C. (2015). Developing resilient agency in learning: The internal structure of learning power. *British Journal of Educational Studies*, 63(2), 121-160. <https://doi.org/10.1080/00071005.2015.1006574>
- Donnison, S. (2009). Discourses in conflict: The relationship between Gen Y pre-service teachers, digital technologies and lifelong learning. *Australasian Journal of Educational Technology*, 25(3), 336-350. <https://doi.org/10.14742/ajet.1138>
- Drexler, W. (2010). The networked student model for construction of personal learning environments: Balancing teacher control and student autonomy. *Australasian Journal of Educational Technology*, 26(3), 369-385. <https://doi.org/10.14742/ajet.1081>
- Flyvberg, B. (2006). Five misunderstandings about case-study research. *Qualitative Inquiry*, 12(2), 219-245. <https://doi.org/10.1177/1077800405284363>
- Gao, P., Choy, D., Wong, A. F. & Wu, J. (2009). Developing a better understanding of technology-based pedagogy. *Australasian Journal of Educational Technology*, 25(5), 714-730. <https://doi.org/10.14742/ajet.1117>
- Gerli, I. (2010). Challenges of advanced technologies and school of the future. *Organisacija*, 43(1), 49-54. <https://doi.org/10.2478/v10051-010-0006-1>
- Green, H., Facer, K., Rudd, T., Dillon, P. & Humphreys, P. (2005). *Futurelab: Personalisation and digital technologies*. Research report. Futurelab. <https://telearn.archives-ouvertes.fr/hal-00190337>
- Greene, J. A. & Azevedo, R. (2010). The measurement of learners' self-regulated cognitive and metacognitive processes while using computer-based learning environments. *Educational Psychologist*, 45(4), 203-209. <https://doi.org/10.1080/00461520.2010.515935>
- Hannon, V., Patton, A. & Temperley, J. (2011). *Developing an innovation ecosystem for education*. Cisco. <https://www.globalcitizenleaders.com/wp-content/uploads/2017/03/Innovation-Educat-CISCO.pdf>
- Harris, J., Mishra, P. & Koehler, M. (2009). Teachers' technological pedagogical content knowledge and learning activity types. *Journal of Research on Technology in Education*, 41(4), 393-416. <https://doi.org/10.1080/15391523.2009.10782536>
- Hennessy, S., Ruthven, K. & Brindley, S. (2005). Teacher perspectives on integrating ICT into subject teaching: Commitment, constraints, caution, and change. *Journal of Curriculum Studies*, 37(2), 155-192. <https://doi.org/10.1080/0022027032000276961>
- KnowledgeWorks & Saveri Consulting (2012). *Recombinant education: Regenerating the learning ecosystem*. <http://knowledgeworks.org/forecast-3>
- Lombardi, M. M. (2007). *Authentic learning for the 21st century: An overview*. Educause Learning Initiative, Paper 1. <https://library.educause.edu/~media/files/library/2007/1/eli3009-pdf.pdf>
- Long, P. & Siemens, G. (2011). Penetrating the fog: Analytics in learning and education. *EDUCAUSE Review*, 46(5), 30. <https://er.educause.edu/~media/files/article-downloads/erm1151.pdf>
- Mishra, P. & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017-1054. <http://www.tcrecord.org/Content.asp?ContentId=12516>
- Moyle, K. & Owen, S. (2008). *Students' voices learning with technologies: Students' expectations about learning with technologies: A literature review*. Canberra: University of Canberra. <http://pandora.nla.gov.au/pan/84310/20100623-1202/Review.pdf>

- Murgatroyd, S. (2010). 'Wicked problems' and the work of the school. *European Journal of Education*, 45(2), 259-279. <https://doi.org/10.1111/j.1465-3435.2010.01428.x>
- Murphy, R., Gallagher, L., Krumm, A.E., Mislevy, J. & Hafter, A. (2014). *Research on the use of Khan Academy in schools: Research brief*. SRI Education. http://www.edweek.org/media/2014-03-07_implementation_briefing.pdf
- Observatory of Educational Innovation (2014). *Adaptive learning and testing*. EduTrends Report. <http://observatory.itesm.mx/edutrendsadaptive/?rq=adaptive%20learning%20and%20testing>
- Papastergiou, M. (2009). Digital game-based learning in high school computer science education: Impact on educational effectiveness and student motivation. *Computers & Education*, 52(1), 1-12. <https://doi.org/10.1016/j.compedu.2008.06.004>
- Pintrich, P. R. & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, 82(1), 33-40. <http://psycnet.apa.org/doi/10.1037/0022-0663.82.1.33>
- Prince, K., Saveri, A. & Swanson, J. (2015). *Exploring the future education workforce: New roles for an expanding learning ecosystem*. Washington, DC: KnowledgeWorks. <https://knowledgeworks.org/resources/future-education-workforce-roles-ecosystem/>
- Ravenswood, K. (2011). Eisenhardt's impact on theory in case study research. *Journal of Business Research*, 64(7), 680-686. <https://doi.org/10.1016/j.jbusres.2010.08.014>
- Silverman, L. L. (1997). *Organisational architecture: A framework for successful transformation*. Partners for Progress. http://www.partnersforprogress.com/Articles/Organizational_Architecture.pdf
- Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: SAGE.
- Staples, A., Pugach, M. C. & Himes, D. (2005). Rethinking the technology integration challenge: Cases from three urban elementary schools. *Journal of Research on Technology in Education*, 37(3), 285-311. <https://doi.org/10.1080/15391523.2005.10782438>
- Sugar, W., Crawley, F. & Fine, B. (2004). Examining teachers' decisions to adopt new technology. *Journal of Educational Technology & Society*, 7(4), 201-213. <http://www.jstor.org/stable/jeductechsoci.7.4.201>
- Taylor, A. (2007). Learning to become researching professionals: The case of the Doctorate of Education. *International Journal of Teaching and Learning in Higher Education*, 19(2), 154-166. <http://www.isetl.org/ijtlhe/pdf/IJTLHE216.pdf>
- Tüzün, H., Yılmaz-Soylu, M., Karakuş, T., İnal, Y. & Kızılkaya, G. (2009). The effects of computer games on primary school students' achievement and motivation in geography learning. *Computers & Education*, 52(1), 68-77. <https://doi.org/10.1016/j.compedu.2008.06.008>
- Vaismoradi, M., Turunen, H. & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & Health Sciences*, 15(3), 398-405. <https://doi.org/10.1111/nhs.12048>
- Weinstein, C. E., Zimmerman, S. A. & Palmer, D. R. (1988). Assessing learning strategies: The design and development of the LASSI. In C. E. Weinstein, E. T. Gooetz & P. A. Alexander (Eds.), *Learning and study strategies: Issues in assessment, instruction, and evaluation* (pp. 25-40). San Diego, CA: Academic Press.
- Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice*, 41(2), 64-70. https://doi.org/10.1207/s15430421tip4102_2

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