

Mentoring students to improve academic performance

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Abstract

How can the results of struggling students be improved? Are there strategies that can be used to help students lift their performance? At EIT Hawkes Bay a semi-formal mentoring scheme was put in place for students who were struggling with their coursework. This paper discusses the provision of learning support, the way the mentoring was approached and the results of the mentoring from the perspectives of both the staff and students involved. Future developments of the mentoring programme are also discussed.

Keywords: Mentoring, learning support.

1 Introduction

EIT Hawkes Bay is a regional polytechnic in New Zealand. The faculty on the Bachelor of Computing Systems (BCS) degree were aware that a few of the students were struggling in most of their subjects, and did not seem to be improving their performance over time. After considering several methods of improving learning support for these and other students, a semi-formal mentoring scheme was put in place to assist students who were noticeably struggling.

This paper provides background on the provision of learning support then outlines a pilot mentoring scheme implemented and its results from the perspective of the faculty and the students involved.

2 Learning support background

2.1 Methods of learning support

Skillen, Merten, Trivett, and Percy (1998) describe three possible approaches to providing learning support: do nothing, provide remedial support, or provide learning support which is integrated into the curriculum.

In the “do nothing” approach, the responsibility of acquiring the skills needed for tertiary study is seen as the student’s responsibility, not the institution’s. This, however, is unfair to students who arrive less prepared for tertiary education (Skillen, et al., 1998).

The remedial approach involves providing additional support to students who do not have the necessary skills, by way of a learning support centre which operates outside the curriculum. Skillen et al. (1998) found the support offered by learning support centres to be “limited: it was remedial in the sense of ‘fixing-up’ the students who were diagnosed (either by themselves or their lecturers) as needing ‘help’; it was inequitable, assisting only a very small proportion of the students population; and it was generic in that the learning support was offered outside of the disciplines being studied”.

Instead Skillen et al. (1998) propose that learning support be integrated with the curriculum, ranging from occasional lectures by learning support staff to credit-bearing study skills courses. While this model recognises that all students need to develop learning skills, is more efficient and is equitable, but it does not cater for students who would benefit from individualised attention.

2.2 Mentoring

One way in which individualised support can be offered is through a mentoring programme, whether formal or informal. There are many differing definitions of mentoring, but they share the common theme that mentoring “is the relationship in which an individual with more expertise provides knowledge and information to a less experienced individual” (Peyton, Morton, Perkins, & Dougherty, 2001). Roberts (2000) describes mentoring as a “process whereby a more knowledgeable and experienced person actuates a supportive role of overseeing and encouraging reflection and learning within a less experienced and knowledgeable person, so as to facilitate that persons’ career and personal development”, and notes that a mentor may also be a role model, coach and/or sponsor for the learner.

Mentoring is common in tertiary education, particularly in health education (see for example Gray and Smith, 2000; Lloyd Jones, Walters & Akehurst, 2001, and Cahill, 1996). Despite a lack of empirical evidence (Jacobi, 1991) there is a general agreement on the effectiveness of mentoring in achieving positive student outcomes (Bond, 1999; Quinn, Muldoon, & Hollingworth, 2002) and retaining students (Talbert, Larke, & Jones, 1999).

Mentoring may be provided proactively for all students, or remedially, for example for at risk and/or minority students as discussed by Bond (1999).

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2.3 Formal vs informal mentoring

Should mentoring be implemented by the organisation, or allowed to happen naturally? If very few students seek learning support (McInnes, James & McNaught, 1995) then it would seem that a formal scheme implemented by the organisation would assist students who need help but do not seek it.

However in a formal mentoring scheme where a new recruit is assigned a mentor, “real freedom of choice is denied: the chemistry and ‘goodness of fit’ are left to serendipity” (Roberts, 2000). Roberts cites Zey (1984) as arguing that the most productive mentoring relationships exist when both mentor and protégé are allowed to choose each other freely. Caruso, as cited by Roberts (2000), further notes that mentoring should be seen as an open system, that an organisation must allow and expect a learner to be mentored by several differing mentors, chosen as the learner sees fit, to satisfy their current requirements.

2.4 Suitable mentors

Peyton et al. (2001) citing Nykodym, Freedman, Simonetti, Nielson, and Battles (1995), identify several types of mentor found in the business environment:

- The information mentor, who typically an individual who discusses topics in casual situations, provides new information, and serves as a teacher.
- The peer mentor, who shares interests and information. Peyton et al. (2001) note that in an education context peer mentors also provide a non-threatening avenue for new students to get support, guidance, and information about the inner workings of their program or department, and that new students may feel better able to express concerns or ask questions to another student with a similar perspective.
- The retiree mentor, an individual who is no longer employed with the organization but is experienced in the complexities of that organization. Peyton et al. (2001) note that the retiree mentor may be one of the best sources of knowledge because they will know all of the intricacies of an organization and will know the best methods of career advancement, and can be extremely beneficial in providing information on the operations of the organization based on personal history.
- The competitor mentor, who does their mentoring through working in a parallel position for a different organization. Competitor mentors can provide support, understanding, and encouragement through knowledge of the problems that are idiosyncratic to that particular position.
- The grandfather/grandmother mentor, a person with long-standing experience in an organization who mentors new or inexperienced employees. This can be beneficial to the protégé as the mentor is still employed with the organization.

The equivalent mentors in an education setting could include more senior students, graduates, work placement supervisors, dedicated learning support staff, tutors or lecturers who teach on the student’s programme or people who work in the industry which the student wishes to join.

Goodyear (2006) identifies that two factors appear to be most important in the decision to mentor: a sense of being able to relate to the person, and a belief that the person has potential.

2.5 Lecturers and tutors as mentors

Involving a member of the faculty in learner support overcomes Skillen et al.’s (1998) objections to a generic learning support centre which is not related to the curriculum.

Zachary (2002) argues that “teachers who prepare themselves as mentors increase their potential to enhance student growth and development, help students maximize education experiences, and enrich their own teaching experience and professional development. Mentors often report that they gain exposure to new and diverse perspectives, improve coaching and listening skills, find work more meaningful and satisfying, hone desired leadership skills, and often become reengaged professionally.” These personal benefits also benefit the organisation through a higher skilled and more motivated employee.

However Roberts (2000) discusses concerns when the mentor is also an assessor: on the one hand, they are in a prime position to assess the learner’s progress; on the other they may have access to confidential information provided by the learner that an assessor generally would not know.

3 Mentoring BCS students at EIT Hawkes Bay

Faculty on the BCS degree considered some of the options discussed above, particularly integrating study skills into the curriculum or creating a study skills course within the first semester or as part of an orientation programme. There were concerns about the effectiveness of a course run before the programme starts, as it was felt that students would believe that their study skills had been sufficient to get them through high school, and not realise that they need additional skills in tertiary education. On the other hand, if a learning skills course was to be run during the term, then it must be in the students’ spare time or replace another course. In the faculty’s experience, the students who turned up to optional study skills sessions were those who did not really need them. If the course was to bear credits to encourage participation, which course should be removed from the curriculum? If learning skills were to be incorporated into the curriculum of existing courses – the most integrated option – which learning outcomes should be removed? It quickly became clear that the addition of learning skills to the curriculum, while possibly the most effective option, would be very difficult to implement and must be tackled as a long-term strategy.

EIT has a learning support centre with staff dedicated to helping the students succeed. Study skills workshops are run throughout the term, but they are not well attended and are not integrated with the students' courses. The centre also has a peer tutoring scheme which recruits students who have done well in their subjects to act as peer tutors to students who are currently taking that course. This provides both subject-specific knowledge and a peer to provide advice, and the learning support staff liaise with the faculty to ensure that peer tutors are suitable to teach others. However there is a lack of students who are willing to be peer tutors – even though it is well paid – or even know about the scheme, and the centre struggles to find peer tutors in some subjects, particularly the more technical computing subjects. There is also a delay of about 2 weeks before the centre can find and allocate a peer tutor, which is often too late for students with looming deadlines who have just realised they need help. Unfortunately, very few of the faculty actively encourage students who do well to consider being a peer tutor. It was recognised that the centre could be better utilized, but these concerns meant that this was also seen as an option which must be improved as part of a long-term organisational plan.

In the mean time, a semi-formal mentoring scheme was put in place to assist students whom faculty had identified as struggling in their coursework. One of the teaching staff volunteered to work with those students as a mentor on an ad-hoc basis to try to help them improve their study skills.

4 Results of the mentoring scheme

The programme co-ordinator referred students who were struggling to the mentor, who then contacted the student. In an initial meeting the student and mentor discussed how their classes were going and what problems they were having, and discussed some ways in which their academic performance could be improved. The mentor suggested several avenues of additional information such as assistance by learning support staff, information on study skills relevant to the student's needs, and further mentoring.

Of the students referred to the mentor:

- One had been struggling with a high workload and family commitments; they never met with the mentor, and subsequently dropped out of the course.
- Two met with the mentor once. In the meetings the students were asked to reflect on what was causing them problems, and why those problems arose. In both cases the mentor was a lecturer in one of their courses, and was able to advise the students on behaviours that they could implement to achieve better results. Both students showed a marked improvement in both their work in class and assessment grades after the meeting, and neither the students nor the mentor felt that there was a need for further meetings.
- Another student was struggling with learning disabilities, and in the initial meeting was referred to

the Disability Support Co-ordinator for specialised assistance. They subsequently met with the mentor on a semi-regular basis to “check in” and discuss any course-related issues that they were having.

- Three students took up the offer of further mentoring, and a plan was mapped out based on the student's needs. These students are discussed in more detail below.

4.1 Observed Results of students who undertook long-term mentoring

One student was referred to the mentor because they struggled to complete assignment tasks, instead doing personal research in the topic in areas in which they were interested. In the initial meeting the student decided they would rather pass the course as well as do personal research, so the mentoring sessions focussed on planning time to work on assignments then encouraging the student to monitor their progress against the plan and reflect on the results. With the student's permission the mentor also kept in touch with their lecturers and “chased up” the student when assignment due dates were approaching.

At the end of the semester the student passed all but one course, and went on to complete their degree well, receiving an A in their final project.

Another student scored very poorly in tests and exams although they knew and understood the material. In the initial meeting the mentor asked the student to sit a mock test in one of their subjects and observed how the student went about it. The mentor then planned out a set of steps for improving test performance which included the student doing research into their learning style, how to study and how to sit tests. The mentor then set a series of “mini-tests”, after which the mentor and student reviewed how the student had prepared for the test, their approach to answering the questions, the quality of the answers, and the mentor would feed back the behaviour observed as the student sat the test. Together areas of improvement were identified to work on over the coming week, and a week later the student would sit another mini-test. In order to be fair to the other students on the course, the whole class was given the opportunity to take part in these sessions as preparation for the test, but – unsurprisingly – no-one else did.

The student showed clear improvement on each mini-test in terms of preparation, strategy and quality of answer and an observable reduction in “exam stress”. Over the semester the student's test grades improved from around 20% to around 70%, and the student reported improvements in their assignments as well. The student continued to achieve higher grades, and successfully completed their degree last year.

The third student often did not hand assignments in because they were not finished. At the initial meeting they identified disorganisation and a desire to do the assignment “perfectly” as issues. The mentoring sessions involved the introduction and use of a series of time management and planning tools such as a weekly plan

and prioritising methods, and reflection on the application of these tools.

The student passed one paper that semester, although they withdrew from the other that they were enrolled in. However they reported that they were able to achieve a lot more – successfully working on two jobs as well as managing family life better – than they had been able to do previously.

Each of the mentoring programmes was highly individual, based on the students' needs. They involved a large time commitment for the mentor, in addition to their regular teaching load, but the initial results seemed to be very positive. However it was important to get feedback from the students themselves, to ensure that the improvement had come from the mentoring rather than external factors, and that the students felt the programme to be beneficial.

5 Study Methodology

Feedback was sought on the effectiveness of the mentoring programme from the three students who had been involved in long-term mentoring programmes.

Data was gathered during an informal interview led by a researcher who was not involved in the mentoring programme, to enable the students to provide unbiased feedback. The interviews were recorded on tape with the students' permission.

Feedback was also sought from the mentor and the programme co-ordinator in informal interviews.

6 Students' perceptions of the mentoring scheme

The three students who had been involved in long-term mentoring were asked to provide feedback on the effectiveness, value and costs of the mentoring sessions. The students were asked to describe how the mentoring started, what was done, whether there were any benefits, and what the costs involved were.

6.1 How the mentoring started

All three students felt that the mentor had simply noticed that they were struggling, approached them and offered to help them. They felt that this was good, because it was informal and non-judgemental. In fact, the programme co-ordinator had asked the mentor to approach two of the students, but they were not aware of that.

6.2 What was involved

The mentoring programme was extremely different for each student. One student described it as "help on assignments, basically checking up on me", and "bringing it to my attention that I had a certain amount of time, and I was trying to do too much stuff. It put a bit more direction into where I was going." Another student described it as "help with exams", but also "planning – how to set your times... watch your priorities, set goals." The other student described it as "planning" and "time management skills", and commented that "mentoring ...

needs to be about that, because there's more to it than just handing your projects in, because you need to be able to organise your life to do the study in time."

One student noted that the process followed was structured "although you didn't know it at the time; [you were] guided through it".

6.3 The costs

Two students noted the cost of time and travel. One stated that "even if it cost \$50 an hour, it would all be worth it". The other felt that if they had to make a special trip in for the session they would, but only if there was no other option. For that student it was an advantage that it could be fitted in when he was on campus anyway. Both also recognised the cost of staff time involved.

6.4 The benefits

All three students felt that the mentoring had been extremely beneficial to them, and all felt that they would still be failing the same papers without it. The benefits noted by the students include:

- direction;
- increase in marks;
- more effective work, instead of working on the wrong thing or using an ineffective study method;
- comfort approaching other lecturers for help with coursework;
- improvement in other study areas – e.g. better assignments when the mentoring focussed on exams and vice versa; and
- improvement in home life due to improved time management skills – one student commented that their children were benefiting because the student was planning time with them.

The two students who were no longer seeing the mentor reported that the benefits had continued after the mentoring – their grades were still higher and they went about their coursework in better ways.

6.5 Tutor support compared to help from support staff

The students felt that the learning support provided by the institute was not as useful as the mentoring. One had not thought to approach the learning support centre, because they were not struggling to understand the topics. The other two had approached the centre for help – one found the information of no use, and the other felt that they had given what had been asked for, but the student didn't really know what was needed, so it was not of great help. Both students had also tried to get subject-specific help but the centre had been unable to arrange someone who could do that. Both students commented on the wait time – there was usually a 2 week wait before help could be arranged, and that was either too long or the student lost interest. They felt that the mentor, as a lecturer on their programme, was better able to understand what the

students had to do, and also that the teaching faculty were the ones who would notice if a student was struggling. They also felt that the mentor was able to understand what they needed, rather than just doing what they asked. One commented that they had sought out many professional counsellors over the years, and that the mentor was “more effective than any of them”.

Another comment was that student support “is often the ambulance at the bottom of the cliff scenario – it was for me – I had 2 assignments due at once, and to be told that there’s something available to help you through that, and not just the study side of it but the life skills side” was very valuable.

6.6 What made it work?

The students made it clear that mentoring was a personal thing, and that what worked for them might not work for others, although they felt that mentoring would be beneficial for all students.

One commented that “mentees” had to “be willing to make an effort” and felt that it had worked for them because they were putting in a lot of effort, but in the wrong direction.

Another commented that personal connection was very important, and felt that the mentor had understood their way of thinking immediately. They felt that mentoring would not work without rapport between the mentor and student. They commented that it would be very difficult to say “I don’t like you – could I have someone else please” but that it was important to do so if the mentoring was to succeed.

6.7 Changes that could be made

The students did not suggest improvements, except one commented that the mentor could “kick my butt more”. In one interview the idea of group meetings or a study skills class was discussed, but the student felt that one on one mentoring was “far more effective” because in a group “it’s easy to think about something, but one on one you have to do it”. However another student felt that providing study skills to all students would be beneficial, and suggested tests to help students learn how they learn and some ways they can work with that. All parts of the mentoring were found to be useful, and all students found the mentoring extremely effective, and felt that without it they would still be struggling.

6.8 Summary

The students reported that they felt comfortable because the mentor had just noticed they were struggling and had informally offered help. In fact, the programme co-ordinator had asked the mentor to approach two of the students, but they were not aware of that. It would seem from their comments that a seemingly informal approach would be more positive than being publicly identified as a “struggling student”.

All three mentoring programmes involved planning skills, although the students’ specific problems were completely different. The students reported that this was very useful.

Wider skills such as planning and prioritisation may be important to other struggling students, as well as subject-specific help.

The students themselves felt that the benefits of the mentoring were clear, and attributed those benefits to the mentoring, rather than external factors. Because sessions were arranged when they were on campus there was little cost to them, although they recognised the cost of staff time.

The students preferred help from a member of the faculty in preference to the learning support centre, because the faculty saw the student in class and could better identify problems, rather than simply providing help as asked. Help was also available immediately, without the wait to find a suitable person. Although not explicitly stated, it seems that a pre-existing rapport with the mentor was also an important factor.

Finally, the students’ own attitudes contributed to the success. All three were highly motivated and were already putting effort into their studies. They were therefore open to learning new ways of working that would help them spend the time more effectively.

7 Staff perceptions of the value of the mentoring scheme

7.1 The mentor

The mentor felt that all three mentoring programmes had been highly beneficial to the students, and that this was reflected both in their marks and in their demeanour – the students seemed happier and more confident. The mentor also acknowledged a personal benefit of seeing people who were struggling successfully completing the degree and going on to new challenges. The mentor also felt that their teaching practice had improved through gaining a deeper understanding of the sorts of issues students in general struggle with.

The cost to the mentor and organisation is in their time meeting with the students, planning the programme of work, and discussing the students’ progress with other tutors. This time commitment was estimated to be half an hour of preparation for every half-hour meeting, so approximately one hour per week per student. This did not interfere with the mentor’s teaching load, but did need to be managed. The mentor felt that organisational support and recognition is important to acknowledge the extra work done and to ensure that workload is adjusted if need be.

The mentor also felt that organisational sanctioning of mentoring programmes is essential in case of any problems or adverse experiences.

The mentor’s perception of the success of these three programmes is that there was initial rapport between the mentor and student, so that the mentor knew them well enough to be able to find out what help they needed. The mentor also felt that these students were “ready to be helped”, and that some students do not want help.

7.2 The Programme Coordinator

The Programme Coordinator for the BCS degree viewed the mentoring programme as an “extremely successful exercise”. The benefits were perceived as “saving a person” as well as retaining student numbers. It was noted that the retention was ongoing, as those students went on to enroll in 2nd and 3rd year papers.

The Programme Coordinator felt that the cost of the mentoring programme was the staff time for the mentor, although the role was also seen as part of the regular job of faculty members, rather than additional to regular responsibilities. It was however noted that the role requires “someone passionate about doing it”. The costs were not quantified in the original programme, and the Programme Coordinator felt that this should be done to accurately assess the costs and workload involved.

All students involved in the mentoring programme informally reported the benefits of the mentoring process to the Programme Coordinator, and he observed that the results had an ongoing impact, with students being able to operate with less support in the classroom after the mentoring.

8 Initial conclusions drawn

The clear conclusion is that for these three students the mentoring programme was extremely successful, but that others did not feel a need for it. Key initial findings drawn from the interviews are:

- That the student must want or see a need for the help;
- That the student must be able to make an effort;
- That mentoring must be personalised to the student’s needs, so the mentor must be able to firstly identify those needs, and secondly provide the right support for them;
- That the student must feel a rapport with the mentor, and be able to change to another mentor if it’s not there, without having to be open about wanting someone else;
- That the students found the informal approach good, although they thought it was more informal than it was;
- That the mentoring must be non-judgemental, as students find it hard to ask for help;
- That mentoring from one of the teaching faculty was more effective than mentoring from learning support staff because of the faculty’s ability to identify students who are struggling, discuss the student’s performance with their other tutors, their knowledge of what work was due when, and what it entailed, and their understanding of the courses that the student was doing, the nature of those courses and their workload;
- That mentoring must have a wider focus than coursework, as a student’s performance is also affected by their personal and home life, planning skills and general life skills.

While one-on-one mentoring is expensive in terms of staff time, if the number of students a mentor has is limited the burden can be contained. However organisational support is essential to help balance workload and provide support in the event of any adverse experiences.

The conclusions are based on the comments of a small sample of students so may not apply to a wider population. However they are useful considerations for educators designing a mentoring programme and for evaluating mentoring programmes.

9 The future of the mentoring programme at EIT Hawkes Bay

While the programme has evidently helped three students significantly and improved the performance of three others, it is not perfect. It is remedial, and it is noted that other students could benefit from such a programme even if they are not noticeably struggling. Even for those who are struggling, it is a while before a trend can be spotted, and students may be in their second year before it is clear that they are struggling with most subjects.

The evident success of these three students, and the desire to help more students, sooner, has led to the implementation of a wider mentoring programme within the School of Computing in 2008. All Bachelor of Computing systems will be assigned a member of the teaching staff as a mentor; first-year students will initially be assigned a member of staff who teaches them in the first semester, and will be given the opportunity to choose a different mentor in the second semester. All returning students will choose their mentors, although they will be asked to name a second and third choice, to allow the programme co-ordinator to balance the workloads fairly amongst the staff. In the initial allocation female students have been assigned to female staff and male students to male staff. Students have been told that it is fine if they wish to change mentors for example if they have an already established rapport with a staff member.

It is envisaged that the work with each student will be highly individual, with some students wishing for little contact and some students being given support as discussed here.

10 Conclusion

The students who took part in long-term mentoring sessions clearly found the sessions beneficial both in improving the areas identified as causing problems for them, and in wider academic and personal success. They report that the results were directly related to the mentoring, rather than external factors.

The feedback from students confirmed several points from the literature, including the importance of rapport with the mentor, the value of specialised help being provided within the faculty rather than general support from a separate learning centre, even when providing general “study skills” advice, and the potentially huge success of mentoring programmes.

They also raised new points, including the fact that the student must be willing to put effort into their studies to show improvement, the need for a non-judgemental environment, that the value of a mentoring program is personal, and might not work for all students. They also pointed out that it was necessary for a student to choose their own mentor, and be able to change if they wanted to.

Other points noted by the mentor include the fact that the mentoring programmes were tailored to the needs of the individual student but that all included planning and time management, and it is possible that these skills are useful for many students.

At EIT Hawkes Bay the success of the initial programme has led to the implementation of a mentoring scheme for all students on the BCS degree, through which it is hoped the benefits will be expanded to a wider audience. This will provide an opportunity to expand on the findings of this paper, and consider a wider range of issues including: identifying any gender bias; investigating differences in cultural aspects; identifying resource costs of the staff and the institution; and opportunities for further research.

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