The Grade Predictor Trial across Europe including Comparisons with Placebo Groups.

Background

The External evaluator has carried out a survey with partners to provide a perspective on the trial of The Grade Predictor Tool developed for the 4 partner countries outside of the UK.

The aim of the trial was to implement the Grade Predictor Tool produced with each partner country by firstly training teachers and other associated staff in its usage. Subsequently it would then be implemented with students who were making decisions about their future subject choice or were at risk of drop out and needed help/support in their current study or to be directed elsewhere.

There appears no other tool available across Europe which does this task based on national, regional or local data and which has an interface with teachers and students together. The Grade Predictor methodology is based on the collection of robust student performance data which is interpreted to predict students performance in the future based on their achievement in the past. It is a formula potentially transferable to other education systems although the availability of data in partner countries varies immensely.

The trial was based on the following premises:

- Each partner would have their own tool.
- Each partner would have separate targets.
- Partners would target a range of institutions and a range of courses for involvement depending on their setting and project requirements.
- Partners would collect data on student participation.
- Partners would collect data on student interventions.
- Partners would collect data on destinations of students.

The external evaluator aimed to analyse the participation and destination of students to provide recommendations for future developments. Given the timescale of the project this is likely to be the only feasible analysis of outcomes from the project during its lifespan.

As part of the trial the partners were also asked to identify a placebo group and to use this as a guide in future years in relation to the impact that the Grade Predictor tool could make in their institutions. The project submission states that

"Each partner will be asked to identify a placebo group of students who do not undertake the trial so that in future year's comparisons can be made in relation to achievement and dropout or non completion of courses."

The external evaluation has compared the results from the placebo groups to those participating in the trials in order to make some judgements on impact. This is summarised under each partners' analysis and in the report conclusions.

The Grade Predictor trial sets out to inform the fine tuning of an upgraded tool for each partner including the UK by ironing out discrepancies.

Methodology

Partners carried out their trials. They were asked to record participation on spread sheets for students' at each institution involved in the trial and on each course. Student data was to be broken down on gender, disadvantage and disability where the information was available.

Partners were asked to record the destination of all students who participated and if they had any additional interventions as well as using the Grade Predictor tool.

Partners also identified placebo groups. They were asked to record participation in this group on spread sheets. Student data was broken down on gender, disadvantage and disability where the information was available.

Partners were asked to record the destination of all students who participated and if they had any additional interventions.

The spreadsheets were issued to the partners by the evaluator and returned to him. This report is based on an analysis of all their returns.

Data Returns

Xabec

Spain experiences very high youth unemployment and low dropout from education.

The figures are:

Unemployment rate of youngsters 16-19 in the partner country (%): 54.54 (2017)
Dropout rate in the partner country (%): 21.9

67 Xabec students were involved in the trial of Grade Predictor in Spain. This trial was conducted in three vocational courses: Railway Maintenance, Heating System Production and Electromechanical Maintenance. Electromechanical had the most students with 29, 20 were on the Railway course and 18 on the Heating course.

It is beneficial to examine each course individually.

Heating

18 students all male were involved in the trial. 8 of these were identified as high risk with 5 of those from a disadvantaged background and 3 with disabilities.

1 student who had a disability changed course during the trial and entered a course more reflecting his ability.

1 student after significant mentoring and support sessions was found employment. A few months after entering this he left Spain to return to his homeland.

16 of the students including 6 high risk progressed onto the second year of the Heating System Production course.

Electromechanical Maintenance

29 students all male were involved in the trial. 13 of these were identified as high risk with 5 of those from a disadvantaged background and 3 with disabilities.

1 student dropped out of the institution. This student went onto employment in production.

3 students changed course. 1 entered the Heating course at Xabec and two the Railway Maintenance course. All were motivated and adapted well.

1 student had further interventions. This student was offered the opportunity to participate in a range of social institutions.

The remaining students including 8 high risk entered a second year of training where interestingly 2 females joined the course including 1 that was identified as a high risk student.

This is the course in Xabec evidently which experiences the highest turnover. Of course it is the biggest course but interestingly the vast majority of students leaving had good alternatives.

Railway Maintenance

20 students all male were involved in the trial. 13 of these were identified as high risk, 6 with a disadvantaged background and 5 with a disability.

1 student dropped out of the course. This student found a job and entered that.

1 student changed course. This student found a job but continues his studies on the same course on a part time basis.

1 student had another intervention. This student had significant absences and has had interventions to support him. He continues with high absence and really has dropped out from his studies.

The other students including 10 high risk entered a second year of training.

Summary

Of the 67 students participating in the Grade Predictor trial at Xabec only one can be identified due to absences as not making progress. Those who left courses largely changed to other courses which seem well suited to them or entered employment. In the context of unemployment and dropout rates in Spain these are remarkable figures.

Interestingly the trial included a number of older students including one of 25, one of 40 and one of 48. The tool seemed to work equally as well with these students as with younger ones.

The Placebo Group in Xabec

There were 24 placebo students in Xabec. 2 of these were female, 10 were from a disadvantaged background. 3 had a disability. They were from Welding, Electromechanical Engineering, Railway Maintenance and Heating courses. None of the Grade Predictor trial group undertook Welding.

7 of the students received interventions during the year particularly mentoring. 4 of these students were from a disadvantaged background and 1 had a disability. Some of the mentoring work included the involvement of parents/carers.

Their analysis tells us that 2 students dropped out and 3 did not complete their courses, 2 from Heating and 1 from Electromechanical Engineering. The remainder continued in a positive training destination including 1 female.

Conclusion

Whilst the work of Xabec in supporting students is undoubtedly outstanding the use of the Grade Predictor tool would appear to provide an edge in reducing dropout from the institution. Only 1 from the trial group can be identified as not making progress but with the smaller placebo group we have 2 who dropout and 3 students who still need some support to progress.

Galway and Roscommon Education and Training Board

Ireland experiences reasonably high figures of youth unemployment and school dropout.

The figures are:

Unemployment rate of youngsters 16-24 in the partner country (%): 13.7%
Dropout rate in the partner country (%): 9%

Three GRETB schools were involved in the trial involving 248 students of which 137 were male and 111 were female. 14 of these were from a disadvantaged background and 16 had a disability.
 The three schools were: Merlin College, Colaiste Na Coiribe and Colaiste Bhaile Chlair.
It is beneficial to examine each school individually.

Merlin College

Merlin College had 58 participants, 38 who were male and 20 who were female.10 disadvantaged students participated and one with a disability.

Merlin College reported that all of their students remained on their original course.

Colaiste Na Coiribe

Colaiste Na Coiribe had 89 students participating in the trial, of which 45 were male, 44 were female and 1 had a disadvantage.

Colaiste Na Coiribe reported that all their students remained on their original course.

Colaiste Bhaile Chlair

Colaiste Bhaile Chlair had 101 students who participated in the trial, 54 who were male and 47 who were female. 3 were from a disadvantaged background and 15 had a disability.

10 students were identified as risk, 7 male and 3 female. Of these 3 had a disadvantaged background and 4 had a disability.

Colaiste Bhaile Chlair reported that 9 students changed course of which 7 of these were male and two female. All those at risk students who had a disadvantage or disability were in this group.

Seven of these students had positive known outcomes after the completion of their alternative course. 4 went onto apprenticeships and 3 went onto vocational courses including Film and Documentary, Digital Marketing and Web Design and Exercise, Fitness and Nutrition.

Summary

The results for the trial at GRETB are interesting. Colaiste Na Coiribe is a highly successful school in terms of exam results. Like Merlin College it reported no students dropping out from their courses or changing course. The question here for the schools is would this have been the result without the use of the tool or more pertinently will the use of the tool have any impact on the students subject choice or career choice in the future. It may well be in such schools dropout for example is not an issue but the tool may have longer term impacts.

The results for Colaiste Bhaile Chlair are interesting in so far as this is a relatively new school with students in the last year entering state exams for the first time. The trial shows that of those who changed mostly from vulnerable groups 7 entered very positive destinations.

The Placebo Group in GRETB

GRETB reported on 53 students in their placebo group, 29 of whom were male and 24 female. Of these 4 were from a disadvantaged background and 7 had a disability. 6 of these were identified as high risk students with 5 of those being males, 2 from a disadvantaged background and all having a disability. 6 of the students had interventions 5 of whom were males. All students were from Colaiste Bhaile Chlair. All were on 2 year courses. No students dropped out of the institution or changed course. In the trial group at the same school 9 students changed course.

Conclusion

These figures are interesting when compared to the Grade Predictor Trial group. In the trial group 9 changed course and 7 of these went into positive destinations. The tool seems to be providing other options to students with some very positive destinations resultant from this.

Sataedu

The figures for Youth Unemployment are lower in Finland than Spain and Ireland.

Unemployment rate of youngsters 16-19 in the partner country (%):7%
Dropout rate in the partner country (%): 7.4%

104 Sataedu students were involved in the Grade Predictor trial in Finland. The students were participating in a range of courses. 60 of these students were male and 44 were female. None were recorded by the college as having any disability or disadvantage.

Of the 104 students on the trial 5 students dropped out of the institution. 3 of these were male and 2 were female. 2 males from the preparatory education course for vocational training dropped out for health reasons. 1 male on the restaurant services course showed a lack of motivation as did one girl on the same course and both dropped out. 1 female on the hairdressing course dropped out but found a job.

3 students, 2 males and 1 female received further interventions. Of these students 1 male student from the preparatory education course for vocational training changed school, 1 male on the vehicle technology course received a detailed study plan and the female from the hairdressing course switched to another field of study.

Summary

In comparison to the national figures in Finland the figures on dropout are good for Sataedu students participating in the trial. 5 students dropped out from courses but 1 of these went into employment leaving a figure of four who no destination was recorded for. This potentially leaves a dropout figure of slightly less than 4% and an unemployment figure of less than 4%. Although further analysis would need to be applied by the college, the two courses were dropout was most significant were the preparatory course for vocational training and the restaurant services course. Health reasons were a factor for dropout in the preparatory education course.

The interventions applied by the college also seemed to have a significant impact. All 3 students remained in education as a consequence of their intervention.

The Placebo Group in Sataedu

Sataedu reported 39 students in their placebo group of which 29 were male and 10 female. 2 were from a disadvantaged background. 2 students dropped out of the institution, 1 of whom was male and 1 of whom was female. 1 of these students was from a disadvantaged background. 1 student changed course, a female and 8 students all males had interventions applied.

Conclusion

Whilst the difference between the Grade Predictor trial group and the Placebo group are small the following observations can be made:

- More placebo group students received other interventions.
- Similar numbers dropped out of the institution.
- Slightly less changed course in the trial group.

As stated earlier Sataedu appear to address dropout and course changes well and here the use of the tool seems to have addressed some of the other interventions that may have been used to pursue the retention and good achievement of students.

Zlinsky kraj

The Czech Republic experiences the lowest unemployment rate for any partner country involved in the trial and also lower than the UK.

Unemployment rate of youngsters 16-19 in the partner country (%): 3%
Dropout rate in the partner country (%): 6.6%

There were 160 students involved in the trial in the Zlin region in 4 schools. 96 were male and 64 were female. 8 of these students were from a disadvantaged background and 17 had a disability.

53 of those involved in the trial were recorded as at risk students, 34 were male and 19 were female. 7 of these had a disadvantaged background and 10 had disabilities.

Of the total numbers 5 dropped out of their institution, 3 of which were male. 5 students changed course, 4 of which were male and 6 students had interventions applied, 5 of whom were male and 4 of whom had disabilities.

The figures look healthy in comparison to national figures. A more detailed analysis of each school provides the following data.

Střední škola hotelová a služeb Kroměříž

40 students used Grade Predictor of which 9 were male and 31 female. All these students were on the waiting/cooking course. 2 of the students had a disability. 13 of the students were identified as high risk, 11 of which were female.
2 students dropped out of the institution both female. 1 of these students relocated but found a similar course to join and the other left for employment in the same occupational area.
2 students changed course I male and 1 female. The male entered a retail course and the female entered another catering type course at a more appropriate level.
Overall there were no negative outcomes for any of these students.

Střední odborné učiliště Uherský Brod

Students on 4 courses at this school in Uhersky Brod participated in the Grade Predictor trial. The courses were: Car Mechanics, Agricultural Machine Mechanics, Floor making and Horticulture.
In total 35 students participated including 5 females, 4 on the horticulture course and 1 on the car mechanics course.

Horticulture

4 students participated from this course all female of which 1 was designated as high risk and had a disadvantaged background.

No students dropped out, changed course or had other interventions.

Floor making

6 students participated from this course all male of which 2 were from a disadvantaged background and 2 had disabilities. 4 students were designated as high risk equating to the 2 disadvantaged students and the 2 with disabilities.

1 student dropped out. He entered employment. An intervention was applied with one other student. This consisted of after school classes.

Agricultural Machine Mechanics

11 students participated from this course all of which were male of which 2 were from a disadvantaged background and 1 had a disability. 5 students were designated as high risk including the 2 disadvantaged students and the student with a disability.

1 student dropped out. He entered employment. An intervention was applied with 1 student. This consisted of after school classes.

Car Mechanics

14 students participated from this course. 13 were male and 1 female. 1 student had a disadvantaged background and 1 had a disability. 4 students were designated as high risk including the 1 disadvantaged student and the student with a disability.

1 student a male had another intervention applied. This consisted of after school classes. No students dropped out or changed course.

Střední škola elektrotechniky, informatiky a řemesel RpR.- Roznov

40 students from 6 courses participated in the trial from this institution.
This included:
- 5 males on the 3 year car Electrician course of which 2 had disabilities and 2 were identified at risk.
- 5 males on the 3 year High Voltage Electrician course 2 of whom were identified as at risk.
- 10 females on the 3 year Hairdressing course, 2 identified from disadvantaged backgrounds and 2 with disabilities.
- 5 males on the 4 year Electronic course 1 of whom was identified at risk.
- 10 males on the 3 year Use of Equipment course 1 of whom was identified from a disadvantaged background and 1 with a disability. The male from the disadvantaged background was identified at risk.
- 5 students on the 3 year Sales assistant course, 3 male, 2 female and 4 identified with a disability. 3 students were identified as high risk, 2 males and one female, all with disabilities.

The only course experiencing any dropout, change of course or interventions was the Sales assistant course. Here 1 male with a disability dropped out and 1 female with a disability had an intervention. The numbers are really too small on this course to make any judgements from the figures.
Overall students stayed on the courses they embarked on.

Střední průmyslová škola Otrokovice

45 students from 3 courses participated in the trial from this institution. This included 16 females, 2 students with disabilities and 17 students who were identified as at risk. The course breakdown is as follows:

- 18 students including 10 males and 8 females on the Applied Chemistry 4 year course participated. This included 4 males and 3 females identified as at risk. 2 students both males changed course.
- 9 students all male on the Car Mechanics 3 year course participated. They were all male. 2 had disabilities. 3 were identified as high risk including the 2 with disabilities. 1 student changed course.
- 18 students including 10 males and 8 females on the 3 year Plumbing course participated. 7 were identified as at risk. This included 4 males and 3 females. No student dropped out, changed course, or had an intervention.

Summary

The tool was trialled in a range of institutions and on a range of courses. There was a good variation in numbers of male and females and at risk students including those with a disadvantaged background and those with disabilities.

The outcomes and impacts in the Zlin region are quite significant. Only 1 student out of 160 left their course without a positive destination such as a job or other course. Whilst many students were on the first year of their courses some of which lasted 3 or 4 years this is still noteworthy.

The Placebo Group in Zlinsky kraj

Zlinsky kraj reported 40 students in their placebo group, 27 of whom were male and 13 female. 12 of these students had a disability and 7 were from a disadvantaged background. 13 of these students were identified as high risk of which 8 were male and 2 from a disadvantaged background. 5 students dropped out of their institution during their studies. 4 of these were male. 1 student a female changed course. No interventions were applied to these 40 students.

Conclusion

The significant difference between the Grade Predictor trial in Zlinsky kraj and the placebo group is the dropout rate. In the trial 5 students out of 160 drop out whilst in the placebo group 5 out of 40 drop out. Whilst there could be specific reasons it is a quite marked difference. In addition 80% of those dropping out are boys in the placebo group as opposed to 60% in the trial group. In relation to course change figures were not dissimilar.

It could be noted that the tool helped to identify those most at risk of dropping out and helped address this whilst the absence of this in the placebo group led to a loss of the student. It would be expected that with the trial group changes of courses would also have good outcomes with appropriate alternatives being identified.

Overall Summary of the Trial of the Tool

The implementation of a Grade Predictor tool was a challenge. Each partner needed their own tool for their own country/institution. The provision of data to construct a tool was difficult. Each partner had their own challenges here. The outcomes and potential impact however are quite significant in a number of countries. The following statements can be made with confidence.

- Xabec felt that the use of the tool combined with their other work give significant benefits. Only 1 student did not have a positive outcome.
- The tool in Spain was trialled with students including adults and was equally effective
- In Ireland the outcomes from Colaiste Bhaile Chlair are encouraging in a school with its first cohort of leavers.
- Judgements around an impact at Merlin College or Colaiste Na Coiribe would take a longer term study on subject and course choices. These schools certainly don't experience dropout or course changes.
- The trial at Sataedu showed figures below national averages and interventions having an impact. This institution showed no students participating from an at risk, disadvantaged background or having a disability. It is difficult to say how much impact the tool has here.
- Findings from the Czech Republic like Spain are very significant. The range of schools and courses show that the tool can be used in a number of settings. A range of interventions applied, students going into employment and other courses is particularly encouraging. Teachers spoken to were very enthusiastic.
- All institutions reported dropout and unemployment figures below the national averages usually significantly below.
- The number of at risk students including those from disadvantaged backgrounds and those with disabilities was significant within most partner trials.

Recommendations

- Partners should continue to record data and analyse it during full implementation
- Sataedu should consider recording data for each course to highlight any particular issues better that may arise.
- Partners should use the experience of their trials in the full implementation.
- **Partners should consider the benefits as highlighted through their placebo group activity.**

Overall Summary of the Trial in comparison to Placebo Groups

- In Xabec evidence points towards the Grade Predictor tool having an impact on dropout in the institution.
- In Ireland the tool identifies those who would benefit from other courses and other methods of learning.
- In Finland the trial identifies those who needed interventions and has a small impact on course changes.
- In Zlinsky kraj the tool has had a significant impact on dropout and identified students in need of interventions.

Conclusions

The use of the tool aimed to have the following impacts:

- Improved training and quality of teaching
- Impact on dropout and non completion of courses
- Young people embarking on non traditional courses
- Students stretching themselves through the support of good guidance
- A curriculum better suited to the school cohort.
- Better decision making on the choice between general education and vocational courses.

The trial has impacted on most of these as evidenced by a number of the outcomes for students and the placebo activity. Teachers were involved in training in relation to implementation. Dropout and non completion of courses is remarkably low in the trial. There is evidence of young people on non traditional courses particularly in the Czech Republic. Students have changed to more appropriate courses with guidance. Students appear to have made good decisions largely. Whilst the curriculum has not changed at this stage we have evidence of students entering other courses within their institution or provided by another which they are better suited to.

The following are the measures which the partnership judges its progress against:

- Transfer of Innovation - are the products transferred, trialled and produced genuinely good practice.

These products are genuinely good practice. There are significant benefits to using a grade predictor tool as evidenced through the trials and the placebo work.

- Transnationality - the success of transnational working and the effectiveness of partners' contributions.

Whilst partners have struggled with data and methodologies at times all have successfully implemented a trial in a range of settings. All have succeeded in identifying placebo groups in order to get a feel for the impact of grade predictor tools in their institutions.

- Partnership - the overall management and administration of partnership working.

The partnership is working well towards it intellectual outputs as a whole.

- Dissemination - whether partners have reached a wide audience;

There is evidence in a number of countries of a wide audience being reached.

- Valorisation - whether partnerships have achieved multiplier effects through mainstreaming activity.

This is too early to judge in relation to use of the tool. However the evidence particularly in Spain and The Czech Republic is compelling for other education providers. There is good evidence in at least one Irish school of the impact that can be made whilst in Finland the gains seem small but worthwhile.

- Impact- what difference has use of the tool made to students. Has drop out been affected? Have students achieved well? What are their destinations?

The trial can be positive on this. The evidence particularly in Spain and The Czech Republic is compelling. There is good evidence in at least one Irish school of the impact that can be made whilst in Finland the gains seem small but worthwhile.

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