

RESEARCH SUMMARY

Alignment between the DP and MoNEP in Turkey and the effects of these programmes on the achievement and development of university students



Based on a research report prepared for the IB by:

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Background

This study had two principal aims: 1) to explore the alignment between the International Baccalaureate Diploma Programme (DP) and the Ministry of National Education Programme (MoNEP) in Turkey and 2) to investigate the effects of both programmes on the achievement of graduates at the university level.

The DP is offered by some high schools in Turkey and is considered to be a balanced and challenging educational programme. The first IB World School was authorized in 1994, and there are now 34 schools offering the DP in Turkey (IBO 2014). The DP is not yet recognized on its own for the purpose of direct entry into Turkish universities. Therefore, in Turkish IB World Schools, the DP and MoNEP must be taught concurrently.

Research design

This was a multidimensional, mixed-methods study, involving analysis of major policy papers and written high school curriculums, data from universities related to entry scores and academic performance, and analysis of student perceptions.

To examine the alignment of the programmes, the researchers employed a content analysis tool to compare the written DP curriculum with that of MoNEP based on content and cognitive demand. In the second phase, the postsecondary outcomes of DP graduates in four Turkish universities were examined by comparing the scores of DP and non-DP graduates on the national university entrance examination. Researchers also analysed student academic performance at the university level by comparing students' cumulative grade point averages (cGPA), scores in specific subject areas and continuation and graduation rates. The final phase of the study investigated the perceptions of DP and non-DP graduates about their preparedness for university studies, using an online questionnaire and focus group interviews.

Findings

DP and MoNEP written curriculum scholastic and non-scholastic alignment

Four philosophical ideologies were considered as contributing to the curriculums of both programmes to varying degrees. The policy documents and the documents of the four subject areas (Turkish, English, biology and mathematics) revealed different philosophical emphases and, overall, the DP was found to be more balanced than MoNEP.

Content

In this study, 14 DP and MoNEP teachers carried out content analysis of the two curriculums. There are notable differences between the DP and MoNEP, particularly as the DP is a two-year programme designed for the last two years of high school and MoNEP is a full four-year high school curriculum. In the DP subject areas, there are fewer topics that are treated in greater depth, giving more time to individual units. Conversely, the MoNEP curriculum, extending over four years, offers the opportunity to cover more content in some cases. Generally, time allocation and content were seen to be reasonably similar for mathematics and biology, but different for English and Turkish.

Cognitive demand

Teachers also used a rubric to analyse the cognitive demand of the curriculums. The cognitive demand of the DP was perceived by teachers teaching both programmes to be higher overall than that of MoNEP for all four subjects examined. The overall results, out of 30 possible points, for the disciplines under study are presented in Table 1. The curriculums for mathematics and biology were similar in their cognitive demand, whereas the differences were more substantial for the English and Turkish curriculums.

	Turkish	English	Biology	Mathematics	Total
DP	27.75	20.5	18.5	21.25	88
MoNEP	10	14.5	17.25	16.25	58

Table 1. Overall results of cognitive demand analysis of the disciplines

Academic performance comparison of DP and non-DP graduates

Researchers examined the academic performance of DP and non-DP graduates in terms of their national university entrance examination scores as well as post-secondary success, according to their cGPAs, individual subject grades, continuation and graduation rates.

National university entrance exam

The scores of 385 DP and 376 non-DP graduates in the competitive Turkish national university entrance exams, held in the last semester of high school, were compared for DP and non-DP graduates studying at four Turkish universities. The non-DP graduates had statistically significant higher scores, which suggests that they were better prepared for the multiple-choice questions of the university entrance examination than the DP group. There are two possible reasons for the higher scores of the non-DP group. Firstly, one would expect them to be better prepared for the multiple-choice questions of the university entrance exam given that non-DP graduates receive a great deal of preparation for such exams. The DP, conversely, emphasizes other skills and also prepares students for quite different exams. Secondly, DP graduates have less time to prepare for the national university entrance exam due to the additional requirements of the DP.

University performance

At the university level, the cGPAs of the same sample of DP graduates were significantly higher than those

for the non-DP group (3.04 versus 2.69). Similarly, DP graduates generally had higher course grades for five subject areas taken in the first and second undergraduate years. The size of the effect for English courses was over one standard deviation, while it was one half of a standard deviation when their overall cGPAs were compared (see Table 2).

Continuation rate

This section explored university continuation¹ rates of DP and non-DP graduates. The universities that took part in this study are favoured by DP graduates both for their quality and because they facilitate the transfer of DP graduates with the required cGPA between departments. Nearly a quarter of the DP graduates transferred to another department within the same university, whereas only 5.6% of the non-DP graduates transferred to another department. It should be noted that on entry to university students are assigned by the exam board to a department based on their national university entrance examination results. DP graduates have the option based on their DP score and cGPAs to change their major to one they prefer.

Graduation rate

Only one cohort of students (2009 entry) had been at the university for four years at the time of the study. The graduation rate for DP graduates was found to be nearly three times higher than that of non-DP graduates. Of the 70 DP graduates in the 2009 cohort, 43 finished their four-year degree programme on time, as compared to 16 (of 70) of the non-DP group.

Perceptions of DP and non-DP graduates about preparedness for university

The perceptions of DP and non-DP graduates about their university preparedness were compared in four aspects: sense of belonging, critical thinking skills,

¹ "Continuation" in this context means that students continue to study in the same department in which they enrolled upon university entrance.

	DP graduates			Non-DP graduates			Cohen's <i>d</i>
	N	Mean	Standard deviation	N	Mean	Standard deviation	
cGPA	385	3.04*	0.65	376	2.69	0.69	0.52
Turkish	298	3.59	0.73	183	3.24	0.80	
English	385	3.27*	0.46	370	2.58	0.82	1.04
Mathematics	258	2.49	1.06	288	2.32	1.17	
Chemistry	44	2.75	0.78	46	2.44	0.76	
Physics	156	2.54	0.82	150	2.29	0.91	

*significant at 0.05 level

Table 2. Means and standard deviations of cGPA and the average scores of individual subjects

academic preparation and time management skills. Quantitative data was analysed for three of the four aspects: sense of belonging, critical thinking skills and time management skills. The difference between the perceptions of DP and non-DP graduates was not statistically significant. However, qualitative analysis of the data acquired during focus group interviews showed differences between the perceptions of DP and non-DP graduates.

Sense of belonging

The main difference between the two groups with regard to this aspect seemed to be due to the DP graduates' desire for a challenge. Their satisfaction and sense of belonging was delayed until their second year because university life presented them with few new challenges. As a result many took additional courses. They were also critical of the preparedness of their non-DP classmates, especially in English language proficiency.

The non-DP graduates, coming into a system where skills for independent work were required, had some difficulty during the transition from high school to university. Nonetheless, they were satisfied with university life, and had a strong sense of belonging from the start.

Critical thinking skills

Three critical thinking tests were administered. The quantitative results of these tests showed little difference between DP and non-DP graduates. In the focus groups, however, DP graduates expressed more motivation, engagement and critical awareness. DP graduates used words such as analysis, questioning and creativity to define critical thinking. They also provided examples of activities or courses they had experienced in high school which helped them improve their critical thinking skills. The responses of non-DP graduates tended to be less questioning and critical, and a number of students reported that the didactic instruction style at their high school caused difficulties in the use of critical thinking skills at university.

Academic preparation

Focus group discussions revealed that DP graduates had an advantage over non-DP graduates with regard to the use of English (both in class and in written assignments) and other academic skills learned during high school relevant to university studies. IB alumni also reported feeling prepared for the essay and free-response assignments that they encountered at university.

Time management

Both groups indicated that they were still working to improve their time management skills. However, DP graduates said they adapted more easily to the work requirements at university than non-DP graduates. They attributed this to their experience of meeting long-term deadlines in high school and juggling two programmes at the same time.

Summary

The results of this study suggest that DP graduates in Turkey are well prepared to succeed in university studies. The data helped to explain the difference in the performance of the two groups, and led to the conclusion that the education received during high school plays an important role in how a student can maximize his or her potential at the university level.

References

Information for Turkey. 2014. <http://www.ibo.org/country/TR/index.cfm>.

This summary was developed by the IB Research Department. A copy of the full report is available at <http://www.ibo.org/research>. For more information on this study or other IB research, please email research@ibo.org.

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