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## Vocational career guidance in Dutch higher vocational education

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# Summary

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In the Netherlands, a growing number of vocational education and training institutions have recently implemented new vocational career guidance practices in their competence-based approaches to learning. Vocational career guidance refers to services intended to assist people, of any age and at any point throughout their lives to make educational, training and occupational choices and to manage their vocational careers. While personal interviews are still the dominant tool, vocational career guidance includes a wide range of other services, like group discussions, printed and electronic information, school lessons, structured experience, telephone advice and on-line help. The study reported in this thesis particularly focuses on the effectiveness of vocational career guidance in Dutch higher vocational education.

As one of several institutional actions that enhance retention and graduation, research literature suggest educational institutions to provide students clear guidelines as to what they have to do to be successful. For that reason, institutions have allocated substantial resources to advising and counselling services that intend to guide individual students along the path of goal clarification. However, international research so far is ambivalent about the benefits of vocational career guidance, in particular because appropriate research designs for evaluating vocational career guidance properly are complex. To fill this research gap and concurrently clarify the added value of vocational career guidance, this study investigated the effectiveness of vocational career guidance to enhance student success in Dutch higher vocational education.

The motives to conduct this study into vocational career guidance were twofold and concerned educational as well as financial aspects. Educationally, the question how to guide students in Dutch higher vocational education best in order to enhance their student success has not yet been fully answered. Although the international evidence on the benefits of vocational career guidance in general is limited but positive, research at a national level concluded that investments in vocational career guidance barely yield a profit. Therefore, additional research is important to clarify the added value of vocational career guidance in Dutch higher vocational education.

Financially, Dutch higher education institutions over the past years have allocated substantial resources to advising and counselling services that intend to guide individual students along the path of goal clarification. Institutional benefits of these resources may be seen in increased retention of students, therefore preserving the governmental funding per student rather than losing such funding

if a student drops out. Consequently, not only the institutional expenditures but also the institutional benefits of vocational career guidance need to be monitored as public money could be spent alternatively to enhance student retention. Therefore, this study not only adopted an educational focus on the effectiveness of vocational career guidance in Dutch higher education, but also a financial focus on this topic to make the financial impact of vocational career guidance in Dutch higher vocational education more clear.

This study investigated the effectiveness of vocational career guidance both educationally and financially in four empirical studies, which successively concentrated on the influence of vocational career guidance on student attrition, student success, student motivation and the potential financial benefits of vocational career guidance. In particular, the following research questions (in corresponding order of the four empirical studies involved) were addressed:

1. Does vocational career guidance push back *first-year attrition rates*? And how can the influence of vocational career guidance on *first-year student attrition* be explained, given other known influences on *student attrition* such as growth of enrolment, binding study advice, gender, preliminary education and switching behaviour of students?
2. Does vocational career guidance significantly affect *first-year student success*, given other known influences such as prior academic performance, faculty and gender? And if so, in which way does vocational career guidance affect *student success*?
3. Does *first-year student motivation* benefit from vocational career guidance, given other known influences of gender, age, preliminary education and initial student motivation? And do differences in vocational career guidance scenarios influence *first-year student motivation*?
4. To what extent should student dropout be reduced in order to receive an *institutional return on investment* of vocational career guidance?

The four empirical studies were conducted at Windesheim University of Applied Sciences (UAS), a medium-sized Dutch UAS that in 2006 adopted a new approach towards learning commonly known as demand-driven education. All students of Windesheim UAS from 2006 acquired an extra, eleventh competence called 'vocational career self-management', that was added to the ten core competencies of competence-based Dutch higher vocational education. To acquire this competence, students annually enrolled in a four-credits vocational career guidance course that aimed to provide students all necessary skills and attitudes to self-manage their

student career on Bachelor's level. As provided by teachers who had an extra task in vocational career guidance for which time was assigned, teachers were made directly responsible for the supervision and assessment of vocational career guidance. By introducing vocational career guidance, Windesheim UAS aimed, as of 2007, an annual average decline of institutional attrition rates by at least 15 percent.

The first empirical study, as described in *Chapter 2*, aimed at identifying the influence of vocational career guidance on first-year student attrition. Expecting the integral vocational career guidance system of Windesheim UAS to guide students along the path of goal clarification and to prevent them from leaving Windesheim UAS, this quantitative study investigated the broad trend in first-year student attrition of the cohorts 2000 to 2008 of Windesheim UAS. In addition, the influence of vocational career guidance and other known predictors of student attrition was examined.

As a result of several contextual factors influencing first-year student attrition, this first study found no unequivocal evidence that vocational career guidance pushed back first-year student attrition of Windesheim UAS. First of all, Windesheim UAS faced a tremendous growth of enrolment from 2000 to 2008 that might have led to an increase in first-year attrition rates. Furthermore, this growth of enrolment particularly concerned students from higher secondary general education and from secondary vocational education, as enrolment of the other preliminary education levels remained relatively constant. In addition, an increasing number of first-year students left Windesheim UAS by switching to another Dutch institution of higher education without leaving the Dutch higher educational system. As a consequence, the institutional attrition rate of Windesheim UAS, indicating the attrition of persons from individual institutions of higher education, worked out differently compared to the system attrition rate of Windesheim UAS, referring to the attrition from the wider higher educational system. Based on the system attrition rate of Windesheim UAS remaining relatively constant, vocational career guidance obviously helped first-year students of Windesheim UAS, not by preventing them from leaving Windesheim UAS but by preventing them from leaving the Dutch higher educational system. However, at the same time the introduction of vocational career guidance showed to be less successful as Windesheim UAS had hoped. In particular, a satisfaction survey among students of Windesheim UAS in 2007 showed that students would have liked to have had more individual reflection during their first year, especially with respect to their study progress.

The second empirical study, as described in *Chapter 3*, investigated vocational career guidance in terms of enhancing student success. Aiming to determine whether

vocational career guidance significantly affects first-year student success, this quantitative study particularly concerned a cohort analysis of the mean number of total credits students obtained at the end of their first year. To exclude alternative explanations, this study controlled for possible disturbing influences of other known predictors of student success such as preliminary education and first grade in the first course of academic year 2008/09.

In this study into student success, vocational career guidance met the hypothesized expectations of helping students to persist in their first year of study. As the results showed, first-year full-time students of Windesheim UAS obtained more credits in the competence-based educational system in which they from 2006 were guided to direct their own learning process. Furthermore, students who completed their first year obviously not only obtained more credits after vocational career guidance was introduced in 2006, but at the same time made substantially higher first grades in their first course of study compared to students who left during the first six months. In sum, the results of this study clearly indicated a significant positive influence of vocational career guidance on student success of Windesheim UAS. As our search for alternative explanations showed, we found no disturbing influence of preliminary education on first-year student success, as academic attainment levels prior to university remained considerably stable over time. However, the implementation of the Bachelor-Master structure in 2006, coinciding with the adoption of demand-driven education at Windesheim UAS, to some extent might also alternatively explain this increased student success.

The third empirical study, as described in *Chapter 4*, used a quantitative approach to determine the influence of vocational career guidance on first-year student motivation. Based on a sequence of questionnaires on competencies, skills, motivation, learning style and choice of future profession which all first-year students of Windesheim UAS had to complete, this study particularly focused on the motives that enhance first-year student success. Drawing on incidental evidence indicating motivational loss among first-year students of modern foreign languages at two major English universities, this study expected a decrease in intrinsic motivation experienced by students over the course of the first year.

As this study showed, vocational career guidance in itself obviously did not enhance first-year student motivation at overall level. At the level of individual faculties, however, in two (out of three) faculties and within two (out of four) motivational scales this study observed significant positive influences of vocational career guidance on first-year student motivation. Moreover, the focus on student

reflection conceivably explained the differences between these faculties regarding the positive influences of vocational career guidance on first-year student motivation. Therefore, student reflection may have played an unexpected major role in first-year vocational career guidance.

The fourth empirical study, as described in *Chapter 5*, concentrated on the costs and benefits of vocational career guidance as an institutional action to enhance retention and graduation in Dutch higher vocational education. In particular, this study presented a model to evaluate to what extent student dropout should be reduced in order to receive an institutional return on investment of vocational career guidance. This model was based on a quantitative break-even analysis that confronted the total costs of vocational career guidance with its potential benefits.

As an outcome of choosing particular parameter values in our model, this fourth and final empirical study showed a small number of 14 students to be the break-even point of vocational career guidance at Windesheim UAS. In other words, the potential benefits of vocational career guidance exceeded the costs of vocational career guidance when 14 students or more were prevented from dropout as a result of vocational career guidance. Converted to a reduction in first-year attrition rate of the three faculties involved, the potential benefits of vocational career guidance exceeded the total costs of vocational career guidance from a first-year attrition rate reduction of round 2.3 percent. Compared to the average first-year attrition rate of the three faculties involved in case of research cohort 2008 (i.e. 33 percent), the needed reduction in first-year attrition rate to recover the vocational career guidance costs could be interpreted as feasible. The research question, whether vocational career guidance at Windesheim UAS is worth the investment was therefore, and likely, yes.

In *Chapter 6*, the findings of the different studies are brought together and reflected upon. In overall conclusion, vocational career guidance at Windesheim UAS resulted in positive educational effects on first-year student success as well as first-year student motivation, which were confirmed in previous research. In addition, vocational career guidance obviously helped first-year students of Windesheim UAS, not by preventing them from leaving Windesheim UAS but by preventing them from leaving the Dutch higher educational system. Finally, a break-even analysis of vocational career guidance showed vocational career guidance financially to be worth the investment of Windesheim UAS.

Furthermore, *Chapter 6* discusses some theoretical and practical implications as well as the limitations of this study and makes suggestions for further research. In addition, this Chapter particularly highlights the risks for which higher educational institutions should carefully prepare themselves in case of major educational reforms like the implementation of vocational career guidance at Windesheim UAS in 2006. These risks were an important source of inspiration for this study into the educational and financial influences of vocational career guidance at Windesheim UAS. While investigating these influences, the effects of vocational career guidance on first-year student success appeared far more complex. As a result, the surplus value of educational-financial research as reported in this thesis is twofold. In case an institution changes the educational policy or intends to start an educational reform, similar research could, and likely should beforehand play a very important role in a timely assessment of the possible consequences of these changes. And, last but not least, in case of a current educational reform, similar research could, and likely should play an essential role in investigating the effects of this reform, both meantime and afterwards.