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Published in:
British Journal of Guidance & Counselling

DOI:
10.1080/03069885.2022.2068504

Publication date:
2023

Routledge
Taylor & Francis Group

British Journal of Guidance & Counselling

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/cbjg20

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To cite this article: Inge J.M. Wichgers, Hanke Korpershoek, Matthijs J. Warrens, Monique A. Dijks & Roel J. Bosker (2023) Study profile choices in secondary education: searching for factors underlying the recommendations made by school guidance counsellors and tutors to vignette students, British Journal of Guidance & Counselling, 51:6, 1005-1024, DOI: 10.1080/03069885.2022.2068504

To link to this article: https://doi.org/10.1080/03069885.2022.2068504

Published online: 13 Jun 2022.

BRITISH JOURNAL OF GUIDANCE & COUNSELLING
2023, VOL. 51, NO. 6, 1005–1024
https://doi.org/10.1080/03069885.2022.2068504

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RESEARCH ARTICLE

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Study profile choices in secondary education: searching for factors underlying the recommendations made by school guidance counsellors and tutors to vignette students

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ABSTRACT

Dutch secondary education counsellors and tutors guide students in their study profile choices. Case studies were used to identify factors that characterise profile recommendations. In Case Study 1, vignette (fictitious) students asked for advice. Of the 12 participants, eight provided product advice (study profiles) and 12 provided process advice (important factors), mainly relating to students' interests. In Case Study 2, vignette students wanted to choose between a profile for which they had better marks, or one in which they were more interested. Of the 19 participants, 12 recommended study profiles. All participants provided process recommendations: these mainly involved interests, but also marks. In both case studies, recommendations were not characterised by students' SES, and a few were somewhat characterised by gender.

ARTICLE HISTORY
Received 13 December 2021
Revised 13 April 2022
Accepted 13 April 2022

KEYWORDS
Subject choices; career guidance and counselling; secondary school; career counselling; educational guidance

Student counsellors and tutors in Dutch secondary education provide career guidance to help students continue with a suitable educational pathway in upper secondary and post-secondary education. The main purpose of the present case studies was to identify the factors that characterise secondary school student counsellors' and tutors' study profile recommendations, as little is known about the content and operation of these recommendations. First, a short introduction is given about the Dutch educational system, in which students have to choose a study profile (a combination of school subjects) for upper secondary education.

Study profile choices in Dutch upper secondary education

In Dutch secondary schools, 12-year-olds start at one of three levels: pre-university (vwo), senior general secondary (havo), or pre-vocational (vmbo) education. The pre-vocational tracks include a theoretical, combined, middle-management and basic track, preparing students for different levels of vocational education. The senior general track prepares students for higher professional education and the pre-university track qualifies them to attend university. Students have to choose a study profile at the end of the 9th grade (third year of secondary education) of pre-university education or senior general education, or at the end of the 8th grade (second year) of pre-vocational education.

Table 1 shows all the Dutch study profiles. In the combined, middle-management and basic pre-vocational tracks, schools have to offer one or more of 10 profiles (Rijksoverheid, 2021a). In the other

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Table 1. Study profiles in the Netherlands.

Pre-university and senior general tracks	Theoretical track in pre-vocational education	Combined, middle-management and basic tracks in pre-vocational education
Science and technology (TECH)	Care and welfare (CARE)	- Building, housing and interiors (BUIL)
Science and health (HEAL)	Engineering & technology (ENGI)	- Engineering, fitting out and energy (ENGI)
Economics and society (ECON)	Agriculture (AGRI)	- Transport and mobility (TRAN)
Culture and society (CULT)	Business (BUSI)	- Media, design and IT (MEDI)
		- Maritime and technology (MARI)
		- Care and welfare (CARE)
		- Business and commerce (BUSI)
		- Catering, baking and leisure (CATE)
		- Animals, plants and land (ANIM)
		- Services and products (SERV)

Source: Rijksoverheid (2021a, 2021b).

tracks of secondary education, schools have to offer four profiles (Rijksoverheid, 2021a, 2021b). Study profile choices may restrict students' options because certain post-secondary studies have specific subject or profile requirements, particularly those in STEM fields (science, technology, engineering and mathematics). Moreover, vocational education students whose education is unrelated to their study profile in secondary school are more likely to drop out before graduating than students whose profiles and vocational education are related (Vugteveen et al., 2016).

Some profiles are more popular than others (Onderwijs in Cijfers, 2021; Statistics Netherlands, 2021, see Appendix, Tables A1 to A4). In the basic and middle-management tracks of pre-vocational education, the most common profiles in 2019 were care and welfare (CARE) (26%) and services and products (SERV) (23% and 21% respectively). In the combined track within pre-vocational education, SERV was chosen most often (56%). In the theoretical track within pre-vocational education, business (BUSI) was most popular (52%), followed by CARE (28%), engineering and technology (ENGI) (18%) and agriculture AGRI (3%) (Onderwijs in Cijfers, 2021). In the senior general track, 40% of girls chose economy and society (ECON), compared with 50% of boys. Science and health (HEAL) was chosen by 29% of girls and 19% of boys. Seventeen percent of girls and 5% of boys opted for culture and society (CULT). Science and technology (TECH) was chosen by 5% of girls and 16% of boys (Statistics Netherlands, 2021). Among pre-university students, 21% of girls chose ECON, as did 27% of boys. HEAL was chosen by 26% of girls and by 16% of boys. Eleven percent of girls chose TECH, compared with 25% of boys. CULT was least popular in 2019 (chosen by 11% of girls and 3% of boys) (Statistics Netherlands, 2021). Thus, there are large gender differences, especially regarding TECH and CULT.

Study profile choices and the role of schools in the Netherlands

Most Dutch secondary schools have a career guidance and counselling programme to help students with their career orientation in general, and more specifically with the mandatory study profile choices. Most schools offer classes, activities, written information and conversations with students and parents and use digital career guidance programmes to help students come to a decision. In a study of Dutch school counsellors, Van Langen and Vierke (2009) reported that 97% of counsellors and 98% of tutors were somewhat or strongly involved in profile choices. Sixty-eight percent of participants reported having conversations with all students, and 79% with doubting students. Eighty-three percent also stated that students would first indicate a provisional choice, after which the school would respond with positive or negative advice; in other schools, the order was reversed. Counsellors and tutors likely influence the choices their students make, but little research has been done on this topic. Previous research did show that helping conversations with counsellors in Dutch pre-vocational schools helped develop a work identity in students (Den Boer & Stukker, 2012). An American small-scale study demonstrated that mentees of medical student mentors were more likely to apply to medical school after participating in the mentor programme (Patel et al., 2015). Also, some English reports (Cuff, 2017; Jin et al., 2011) show that teachers can be

important sources of information for students' subject choices. These findings provide starting points for researching counsellors' and tutors' study profile recommendations.

Student counsellors' functions and school policies on students' choices

Some differences in school policies on students' choices may relate to student counsellors' functions – in other words, their roles in career guidance. Smith (2011) described three functions of high school counsellors: gatekeepers, impartial cultivators, and mediators of opportunity. In the gatekeeper model, which was the prevailing approach from the 1960s to the 1990s, counsellors were institutionally mandated to restrict opportunities for students of non-dominant social class, race, ethnicity and gender. Counsellors used subjective criteria to label and sort students and discouraged aspirations that they deemed inappropriate, given their interpretation of students' abilities. This model may relate to the conservative ideological perspective on career guidance (Watts, 1996, as cited in Hearne & Neary, 2020). An example of this could be 'cooling-out schools' and assertive schools, whose counsellors took an active cool-out and push-up role (Resh & Erhard, 2002). Israeli 9th grade (end of junior high school) students in the 1990s viewed counsellors' messages as somewhat more encouraging than discouraging (Resh & Erhard, 2002). Weaker students seemed to be cooled-out to a greater degree, i.e. they were recommended a track that was beneath their ability level. High-achieving boys perceived more encouragement, i.e. causing them to believe that their ability was higher than expected, while high-achieving girls experienced less encouragement. The study of Resh and Erhard (2002) showed that counsellors' recommendations do affect students, in either an encouraging or discouraging way. In this view, an important goal of guidance could be to guide students towards a study profile that maintains existing gender roles. A typical example would be more CARE profile recommendations for girls than for boys.

The impartial cultivator model, the second function, emerged in the 1990s (Smith, 2011). Counsellors provided information indiscriminately, using a "one-size-fits-all" formula, as if the opportunity structure was completely porous. Many counsellors did not want to intervene in students' aspirations, either negatively or positively (Smith, 2011). This could align with the liberal or non-directive ideological approach to career guidance, which is criticised by those who view career guidance as a conservative force and a means of social control (Hearne & Neary, 2020). This approach was demonstrated in Israeli schools Resh and Erhard called "aloof", meaning that counsellors refrained from giving advice, either because they did not see it as their role or because they did not believe that it would make a difference (Resh & Erhard, 2002). It is also reflected in school policies in which schools strive to influence study profile choices as little as possible (Van Langen et al., 2006). This was the policy at 75% of the participating schools in Van Langen and colleagues' Dutch sample.

According to Smith (2011), today's school counsellors act as mediators of opportunity: by building counselling infrastructures and providing individual advice, they connect students to contacts, information, recommendations and other resources. In this third function, they channel information, referrals and resources with the short-term goal of connecting clients to immediate opportunities and the long-term goal of enhancing mobility outcomes and taking responsibility for students' well-being and mobility. They help students to interpret institutional domains, such as the labour market, by shedding light on the cultural capital and institutional know-how that is required to navigate them. Also, school counsellors are charged with judging students, calculating risks associated with their circumstances and using those assessments to provide advice and referrals (Brown, 2006, as cited in Smith, 2011). This approach may relate to the progressive perspective, which views career guidance as a means of instilling change within the individual, with particular emphasis on motivating and raising aspirations in those from disadvantaged backgrounds (Hearne & Neary, 2020). However, this approach is criticised for emphasising individual factors that prevent change and for overlooking community, social and economic influences. Another approach, the radical position, therefore promotes change within hierarchical systems (Hearne & Neary, 2020).

From this third perspective, an important function of study profile guidance would be to help students choose a study profile that they enjoy or are interested in, but a positive career perspective

would also play a role. Although no studies are known that focus on career perspectives of study profiles directly, employment opportunities of tertiary education in sectors like technology, health care, information and communications technology (ICT) and education are relatively high (Bakens et al., 2021). Thus, choosing study profiles that prepare for these fields likely provides better employment opportunities. This might explain the policy of maximising the number of TECH and HEAL choices. In Van Langen and colleagues' sample, 6% of schools had this policy, whereas 16% only guided students towards TECH and HEAL profiles if they felt that students had the ability. An even distribution between study profiles was the policy of 3% of their schools. As one might expect, when school policy aimed to maximise the number of TECH and HEAL profiles, more students on average chose those profiles (Van Langen et al., 2006).

Indicators that teachers (explicitly) used in subject recommendations

Although the English school system does not have study profiles, universities and colleges may include subjects in their entry requirements (UCAS, 2021). Research on subject recommendations can therefore provide relevant insights. In two English reports, external views – such as those of teachers – were an important source of information for students' subject choices (Cuff, 2017; Jin et al., 2011). English secondary school teachers tended to base their subject recommendations on three concerns: enjoyableness, usefulness and subject difficulty (Cuff, 2017). Teachers considered enjoyableness important because students are more likely to do well in subjects they enjoy. For A-level subjects in particular (direct university entry), teachers also took account of what students needed for their future career ambitions. Subject difficulty was interpreted as what individual students might find difficult or easy, depending on their individual strengths. Some schoolteachers felt that each subject is difficult in its own way. Others most often categorised STEM subjects and languages as the most difficult, and subjects such as drama, media studies and food technology as easier. The reasons they gave included workload, the depth of analysis and understanding required, and assessment style. Teachers also viewed certain combinations of subjects as more difficult, such as subjects from very different fields of interest, or combinations of arts, science, or essay-based subjects. Teachers' recommendations thus followed partly from their own perceptions of certain subjects. Since students' individual strengths and interests are essential, these results relate to Smith's (2011) mediator-of-opportunity function.

The role of students' gender and SES

Similar to the gatekeeper model of school counsellors, there are some indications that students' gender and SES (socioeconomic status) play a role in school counsellors' behaviour and recommendations. A German vignette study demonstrated that girls were more likely to be recommended a language-oriented secondary school, and boys a maths/science-oriented school (Nürnberger et al., 2016). Although more than half of a sample of Dutch teachers stated they did not have gender-stereotyped attitudes towards science and technology, implicit association tests indicated biased attitudes in favour of boys (Denessen et al., 2011). Another Dutch study suggested that primary school pupils showed a greater reduction in their enjoyableness of learning about science and technology if their teachers were less enthusiastic. Girls in particular seemed to be affected by less positive attitudes of female teachers (Denessen et al., 2015). Also, when senior general and pre-university students were asked about study profile recommendations, schools appeared to recommend HEAL more often and TECH less often to high-achieving girls than to boys. However, gender stereotypes did not emerge when school counsellors and tutors were asked for profile recommendations based on vignettes (Van Langen & Vierke, 2009). This is a remarkable finding because boys and girls generally differ in their study profile choices in the Netherlands (Statistics Netherlands, 2021). Moreover, Dutch students with more highly educated parents chose science and mathematics subjects more often than those whose parents had a lower level of education (Van Langen et al., 2006).

The present case studies

The purpose of the present case studies is to explore the factors characterising student counsellors' and tutors' study profile recommendations for Dutch upper secondary education. This could then shed light on how supervisors in secondary education perceive the processes involved in study profile choices. The present case studies could also help student counsellors and tutors internationally to understand how they make recommendations, possibly resulting in well-substantiated recommendations that really help students to choose suitable educational careers. The following research question was formulated: *Which factors characterise student counsellors' and tutors' study profile recommendations, and what is the role of student gender and SES?*

Two case studies were conducted using different types of vignettes for data collection, as well as participants' subsequent explanations. As will be explained below, we encountered some drawbacks with the use of vignettes in the first study. A second version was therefore created and tested in the second study.

Case Sudy 1

Method

Sample

A sample of 12 student counsellors and tutors from three participating schools was used in Case Study 1 (Table 2). Almost all counsellors at the schools took part, and one tutor from every track. School 1 offered all levels of secondary education. School 2 offered the senior general track and the pre-university track. School 3 was a pre-vocational school.

Materials

Eight vignettes were developed, in line with Nathan et al. (2010). Unlike observation, vignettes provide all participants with the same contextual framework, which enhances the comparability of responses (Poulou, 2001). Vignettes present respondents with a more concrete and unambiguous stimulus to refer to than many questionnaires and interviews (Poulou, 2001).

The vignettes consisted of very short stories describing eight fictitious students in the 8th grade (pre-vocational tracks, age 14–15) or 9th grade (senior general and pre-university tracks, age 15–16) – depending on the level taught by the participant – who sought advice on their study profile choices (Figure 1). The average final mark of the students was 6.5 (just above a pass in the Netherlands), with no fail marks. All students worked hard at school, liked to listen to music and watch TV series, and enjoyed swimming and spending time with classmates. These hobbies and interests were intended to be unrelated to the profiles and were added to make the fictitious students appear more realistic. The only differences concerned gender, Dutch or Moroccan parental place of birth, and socioeconomic status (place of residence and parental educational level). The vignettes concluded with the question: "Which of the following study profiles would you recommend?" Possible answers matched study profiles offered at participants' schools.

Procedure

The project was approved by the Ethics Committee of the Department of Pedagogical and Educational Sciences at the University of Groningen. Data was collected from January to March 2019. Participants were first given an information letter, explaining the aims of the research and stating that the results would be presented anonymously. Participants were asked to sign a consent form.

In Part A of the data collection, a hard copy of the vignette texts was given to participants, after which they were asked to write down their "product advice": the study profiles that they felt were most appropriate. The interviewer then asked the participants to explain their responses and whether these would change if the fictitious students' marks were higher or lower (but still a pass

Table 2. Sample and main results of Case Study 1.

School	Position	Product advice: main recommendation	Process advice: students' interests	Process advice: keeping options open	Process advice: students' marks	Process advice: interests of society	Process advice: stereotyped gender differences
1	Student counsellor, pre-vocational education	Not provided	X	X			
1	Student counsellor, senior general track and pre-university track	Not provided	X				
1	Tutor, theoretical track pre-vocational education	BUSI		X			
1	Tutor, senior general track	TECH				X	
1	Tutor, pre-university track	All: combination of CULT and ECON	X	X	X		
2	Student counsellor, senior general track	ECON		X	X		
2	Student counsellor, pre-university track	Not provided			X		
3	Student affairs coordinator, pre-vocational education	BUSI	X	X			
3	Educational developer career orientation and guidance, pre-vocational education	6x BUSI 1x combination of BUSI and CARE 1x CARE		X			X
3	Student counsellor, middle-management and basic tracks pre-vocational education	Not provided	X				
3	Tutor, middle-management and basic tracks pre-vocational education	CARE	X		X		
3	Student counsellor, theoretical track	4x SERV 2x BUSI 1x TECH 1x CARE	X	X			X

Figure 1. Example of Version 1 vignette.

> Iris Verhoeven attends your school and lives in [neighbourhood] in [city of participants' school]. Her parents were born in the Netherlands, studied at university and then started work. In her spare time, Iris likes to listen to music and watch TV, and enjoys swimming and spending time with classmates. Iris is in the 9th grade of pre-university secondary education and her final mark is 6.5, without unsatisfactory marks. She now has to make a provisional choice and she will have a conversation with you about that.
> Which of the 4 study profiles would you recommend to her?
> - Economics and society
> - Science and health
> - Science and technology
> - Culture and society

mark) (Part B). Part B resulted in "process advice" – namely, factors that participants considered important for making study profile choices.

Analysis

The vignettes and participants' explanations were analysed using thematic analysis, as this is particularly well suited for research questions about people's conceptualisations or ways of thinking about social phenomena (Willig, 2013). The analysis was based on the six phases of thematic analysis as described by Braun and Clarke (2006), although it was an iterative and reflective process (Nowell et al., 2017). All digitalised vignettes, audio recordings, transcriptions and a reflective journal including field notes were stored in a central repository (Phase 1: familiarising yourself with the data). Initial main codes (Phase 2) were the study profiles, Cuff's (2017) three concerns, gender (Denessen et al., 2011; Nürnberger et al., 2016; Van Langen & Vierke, 2009), and SES (Van Langen et al., 2006). These were used when searching for themes, and reviewing, defining and naming them (Phases 3–5). Except for SES, which did not play a role according to the participants, the initial codes turned out to be useful themes. In these phases, we applied researcher triangulation to create the themes "product advices" and "process advices". The final analysis and write-up (Phase 6: producing the report) was done using the reflective journal and researcher triangulation. To enhance the credibility, all relevant results were discussed, including unexpected results and results that did not correspond to main explanations (Nowell et al., 2017), such as the apparent lack of relevance of SES and gender.

Results

The main results of the first case study are summarised in Table 2. Of the 12 participants, eight provided product advice (Table 2, column 3). The others did not give product advice, mainly because they reported not having enough information on the vignette students. Six participants recommended the same study profile for all fictitious students: BUSI was recommended twice, and ECON, TECH, CARE, and a combination of CULT and ECON, were all recommended by one participant. Two participants did not make the same recommendations for all fictitious students. One student counsellor recommended either SERV, CARE, BUSI or ENGI. The educational developer at School 3 recommended BUSI to six of the fictitious students, a combination of BUSI and CARE to another, and CARE to yet another student.

All participants took part in Part B, leading to process advice. Often, multiple factors were important to the participants (Table 2, columns 5-8). The main product and process advice in pre-vocational education will be discussed first, followed by senior general and pre-university tracks. The main factors that characterised the recommendations given in Table 2 correspond to the sections below.

Pre-vocational education

Five of seven participants stressed the importance of students' interests (Table 2). With one exception, they even emphasised that they needed more information about this aspect. This could include

subjects or hobbies that the students enjoy or are interested in, future jobs or education they are interested in, and making their own decisions. One student counsellor needed more information on what makes students happy.

Both students' interests and keeping options open were important to three participants. One recommended that the fictitious students should choose all the study profile subjects (business, biology and physics) in order to be able to follow all study profiles. BUSI is the most general profile, according to the student affairs coordinator (School 3), whereas SERV is the most general profile in the view of the theoretical track student counsellor at School 3. She recommended either CARE, BUSI or ENGI to other fictitious students. "*I follow my intuition: she might be a girl for CARE: parents started working immediately after pre-vocational education, may be more practically minded. But of course that doesn't always have to be the case.*" All three participants stressed that they would prefer to ask students about their interests, hobbies and future career plans.

One participant mentioned students' interests as well as their marks. One tutor recommended CARE because she felt that the student's hobbies (swimming and spending time with classmates) pointed to that student being social. She also reported that the marks were too low to recommend BUSI.

The recommendations of the educational developer at School 3 combined some stereotyped gender differences with recommendations to keep options open. He recommended BUSI to six of the fictitious students, a combination of BUSI and CARE to another, and CARE to yet another student because he considered these two study profiles to be the most general. "*CARE, in general, more girls than boys choose CARE, although that has been changing over the last few years. Yes, I don't know why, but as a girl, you can become a nurse.*"

Pre-university and senior general education

Three of five participants reported needing more information about students' interests. For one student guidance counsellor, this was the only consideration. She did not give process advice: "*I should have a conversation with them and I would have to know: what are the subjects you like? Or the direction in which they want to go*".

Students' interests can also relate to marks. One tutor recommended a combination of CULT and ECON because the fictitious student's hobbies (swimming, music, TV) did not point to HEAL or TECH. However, she argued that more specific information on students' marks would be helpful.

Two participants regarded students' marks as the most important factor characterising student counsellors' and tutors' study profile recommendations. One needed to know students' marks and teachers' recommendations. One participant recommended ECON because she believed that students needed a 7.5 (more than satisfactory) to choose mathematics B, physics or chemistry. She considered this the most general profile.

Including the interests of society was suggested by one participant. One tutor recommended TECH to all fictitious students because it offers the best chance of getting a job and Dutch society needs technical people most.

Discussion

Fictitious students seeking study profile advice were presented to 12 student counsellors and tutors. All student counsellors and tutors provided process advice. The interests and happiness of students were the most important factors characterising participants' study profile recommendations. These considerations were often combined with students' marks and keeping options open, i.e. making a broad or general choice. For participants, "broad" meant taking the mandatory subjects in most study profiles that a school offers. Only one participant recommended that students choose subjects that may help combat a shortage of occupations. Thus, all participants considered enjoyableness and subject difficulty, as found in Cuff's report on teachers' concerns for subject recommendations (2017). Three participants explicitly pointed to Cuff's third concern: usefulness for future career ambitions. Most participants stated that they did not take SES and gender into account and including this was generally even met with resistance.

There were some differences between participants from the different tracks. Keeping options open seemed a more important consideration for participants from pre-vocational tracks, compared to senior general and pre-university tracks, whereas students' marks seemed more important in pre-university and senior general tracks.

Four student counsellors did not provide product recommendations and most of the other participants also expressed difficulty in making study profile recommendations. This is in line with the policy of most of the participating schools in the study by Van Langen et al. (2006), which aims to influence study profile choices as little as possible. The behaviour also corresponds to the impartial cultivator model (Smith, 2011) and Resh and Erhard's (2002) aloof schools, in which counsellors did not see advising students as their role.

The results show little or no evidence of (explicit or implicit) attitudes towards students' SES and gender, in contrast to the findings of Denessen et al. (2011), but similar to some of the findings of Van Langen and Vierke (2009). Social desirability may have played a role in participants' responses to the vignettes, or student counsellors and tutors were not aware of the role of background variables in their recommendations.

Case Study 2

Although the vignettes in the first case study resulted in interesting recommendations, some issues arose. Firstly, participants reported that they needed information on students' interests and career ambitions. Secondly, whereas not all participants were willing to give a product recommendation, they all provided process recommendations. Thirdly, participants stated that they did not know their students' socioeconomic backgrounds in most cases. Including it was even met with resistance and sometimes negatively influenced the course of the interviews.

Because the sample of Case Study 2 was similar to the first, there was a realistic chance that including SES in Case Study 2 would also be met with resistance. The research question was therefore reformulated into: *Which factors characterise student counsellors' and tutors' study profile recommendations, and what is the role of student gender?*

In the next version of the vignettes, students' interests and career ambitions were included, which probably made the dilemmas feel more authentic. Moreover, although we were still interested in product advice, the focus shifted more to process advice and how this was composed. Two typos and two missing sentences in Version 2A were corrected in Version 2B.

Method

Sample

The new vignettes were presented to 16 school counsellors and tutors at four Dutch secondary schools (see Table 3), which were different from the three schools in the first case study. All school counsellors took part as well as one tutor from every track. Schools 4, 5 and 7 offered the senior general track and the pre-university track. School 6 offered all levels of education.

Materials

We developed two versions of the vignettes, with the same content but a somewhat different layout. In the new vignettes (see Figure 2), fictitious 8th (pre-vocational tracks) or 9th (senior general and pre-university tracks) grade students sought advice on their study profile choices. This time, however, 12 vignettes described how the students were choosing between a study profile for which they had better marks (a 6 or 7), or one that they were slightly more interested in but for which they had lower marks (a 5 or 6). Almost all participants in case study 1 explained that they had more information about students in real life and/or that they required it, such as the study profiles that they were deciding between. The profiles that students could now choose were therefore close in terms of content, such as CULT vs ECON, ECON vs HEAL, or HEAL vs TECH. Hobbies were

added that were more or less in line with different study profiles, such as taking care of pets (HEAL) or playing games like Monopoly and Risk (ECON). An additional piece of information was that all students tried their best at school and did not yet have specific career ambitions. Half of the fictitious students had a typical girl's name and the other half a typical boy's name. As explained earlier, socioeconomic factors were no longer included.

The vignettes concluded with the question: "Which of the following study profiles would you recommend?" Possible answers matched the two profiles that students were deciding between, plus, in Version 2a (schools 4 and 5), "other, please specify".

In Version 2b (Schools 6 and 7), this was changed to "please specify which study profile/ subjects". Also, the layout of Version 2b was made slightly more appealing (Figure 3).

Procedure

As in Case Study 1, participants were given an information letter and were asked to sign a consent form. The vignette texts were offered to participants at schools 4 and 5 immediately preceding an interview on profile choice guidance, views on study profiles and study profile choices (not included in the present case studies). The vignettes were emailed beforehand to participants at Schools 6 and 7, with a request to complete them before the interview. Participants were asked to write down their recommendations first (Part A). Participation in this part was expected to lead to product advice. Participants discussed their answers with the interviewer immediately afterwards (Part B), resulting in process advice. Data was collected from May to September 2019.

Analysis

Audio recordings of the interviews were transcribed verbatim and coded in Atlas.ti. We again used Braun and Clarke's (2006) phases of thematic analysis. This time, the initial codes were students' interests, their marks (based on the vignette texts), and codes resulting from the first case study: keeping options open, stereotyped gender differences and the interests of society (Phase 2). Students' interests and their marks turned out to be the most common themes, and other, strongly varying, themes also emerged, such as hobbies or adding elective courses (Phases 3-6).

Results

Case Study 2 also resulted in product and process advice. The main recommendations (Table 3, column 3) included both product and process advice, that is, as a result of the "other, please specify" option. The process advice or main factors characterising these study profile recommendations were students' interests and their marks or abilities. These will be explained in more detail in the following sections.

Pre-vocational education

Four participants were pre-vocational education counsellors or tutors. One student counsellor did not give a product recommendation because she needed to know in detail which subjects and hobbies students enjoyed and why: "*then I think: what kind of sports do you do, what do you do then, and how big is that hobby?*". One tutor did not give product advice because she wanted to talk to students to find out the reasons for their marks and to find out what parents had to say about their child. Another tutor arrived at various recommendations based on students' marks, interests and hobbies. One participant usually chose TECH or CARE because he believed that students needed to be more able in order to do ECON. He mainly chose the study profile for which the student had the highest marks, but if both were sufficient, he picked the study profile that the student was more interested in.

Table 3. Sample and main results of Study 2.

School	Position	Main recommendation	Process advice
4	Student counsellor, senior general track*	Other, please specify: students have to make a decision themselves	Students' interests
4	Student counsellor, pre-university track*	Other, please specify: conversation	Students' interests
4	Tutor, senior general track*	Other, please specify: conversation	Students' interests, marks
4	Tutor, pre-university track		Students' interests
5	Student counsellor, senior general track and pre-university track		Students' interests, abilities
5	Tutor, senior general track*	Various	Various
5	Tutor, pre-university track*	Study profile for which student has highest marks, unless marks are sufficient for the other option, in which case conversation about career ambitions	Students' interests, marks
6	Student counsellor, pre-vocation-al education		Students' interests
6	Student counsellor, senior general track*	Study profile in which student is more interested	Students' interests
6	Tutor, basic track*	Various	Students' interests, marks
6	Tutor, middle-management track, pre-vocational education		Students' interests, marks
6	Tutor, theoretical track, pre-vocational*	Mostly TECH or CARE	Students' interests, marks
6	Tutor, senior general track		Students' interests, marks
6	Tutor, pre-university track*	Study profile in which student is more interested	Students' interests, marks
7	Student counsellor, senior general track and pre-university track*	Often combination of both study profiles, or depending on conversation	Students' interests
7	Tutor, senior general track*	Often combination of both study profiles	Keeping options open -> students' interests and marks
7	Tutor, pre-university track*	Various, often combination of study profiles if student has sufficient marks in both profiles	Students' interests, marks

Note: Participants marked with an asterisk took part in part A of the data collection.

Figure 2. Example of Version 2A vignette.

Tim is in the 9th grade of senior general secondary education in your school and has to make a provisional study profile choice. He tries his best at school, and in his spare time, he likes to do sports, drawing and play games like Monopoly. He does not yet have specific career ambitions. Tim tries to decide between Economics and Society and Culture and Society. Although he is interested in both profiles, he is slightly more interested in ECON subjects. His mark in CULT subjects are higher: his average CULT mark is 6, and his average ECON mark is 5. He is seeking for your advice. Which profile would you recommend?

- o Culture and society
- o Economics and society
- o Other, please specify

Suppose Tim's average mark in CULT subjects is 7, and his average mark in ECON subjects is 5. Which profile would you recommend?

- o Culture and society
- o Economics and society
- o Other, please specify

Suppose Tim's average mark in CULT subjects is 7, and his average mark in ECON subjects is 6. Which profile would you recommend?

- o Culture and society
- o Economics and society
- o Other, please specify

Senior general and pre-university education

Most participants were tutors and student counsellors in the senior general and pre-university tracks. All of them considered students' interests. Ten of the 13 also took students' marks or abilities into account.

Figure 3. Example of Version 2B vignette.

The following students are in your 8th grade class in the basic track of prevocational education and have to make a provisional choice. They are all trying to decide between two study profiles, and are asking for advice in a conversion with you. Which profile would you recommend?

Farida

- o Has no specific career ambitions yet
- o Is trying to decide between TECH and BUSI
- o Is interested in both profiles, but slightly more in BUSI
- o Marks: average marks in TECH subjects is 6, average marks in BUSI subjects is 5
- o Hobbies: sports, DIY, games like Monopoly and Risk

Your study profile recommendation:

- o TECH
- o BUSI
- o Other study profile/subjects, please specify… ☐

Suppose Farida's average mark in TECH subjects is 7, and her average mark in ECON subjects is 5. Which profile would you recommend?

- o TECH
- o BUSI
- o Other study profile/subjects, please specify… ☐

Suppose Farida's average mark in TECH subjects is 7, and her average mark in ECON subjects is 5. Which profile would you recommend?

- o TECH
- o BUSI
- o Other study profile/subjects, please specify… ☐

Two participants did not give product recommendations. One was only able to advise students after a conversation. Other participants chose "other, please specify" and added "have a conversation about motivation", or "student has to make a decision themselves, it is about more than interests: putting in effort, etc.". One counsellor was in favour of choosing what the student found most interesting.

Four participants in version 2a took both students' interests and marks into account. For example, one tutor chose the profile for which the fictitious students had the highest marks. However, if the students had sufficient marks in both, he would enquire about career ambitions.

Regarding version 2b, one tutor did provide product advice. He was slightly more interested in marks. Marks were more important for TECH and HEAL profiles:

> If a student's marks are 5 or 6 […] and he tries his best. I think that is a higher risk, because it's possible that he might not understand subjects as well, compared to if he chose culture and society.

Another tutor disagreed:

> My STEM colleagues always say that a 6 or 7 is required. I don't know if that is the case. […] That glorifies that study profile. I also respond badly to the statement that you need to be smart to do science study profiles, whereas anyone can do culture and society profiles.

She also took account of students' marks, as well as their interests and hobbies, which often led to TECH or CARE recommendations. Another tutor mainly chose the profile with the highest marks, but if both were sufficient, that participant selected the study profile in which the student was more interested. Two participants filled out different answers, but often solved the dilemma by adding elective courses in such a way that most subjects in both profiles were included.

Discussion

A dilemma that probably felt more authentic and information on students' interests were added to Case Study 2, and SES was excluded. Five of the 17 participants did not provide product recommendations because they required a conversation on students' motivation and interests before giving a recommendation. Three of seven participants in Version 2a also stated that they would have preferred a conversation with the student. Regarding process recommendations, five of 17 participants only considered students' interests, but nine also included students' marks. The product advice in the second case study varied considerably, but frequently mentioned were a conversation with the students, recommending a combination of both study profiles, or choosing a study profile in which the student was most interested.

The results do not differ markedly for participants from the different tracks. More student counsellors than tutors refused to make recommendations to fictitious students. Six of the student counsellors and tutors who did recommend a study profile tended to choose what students were most interested in, unless their marks were insufficient. This resembles Resh and Erhard's (2002) encouraging counselling style and school counsellors as mediators of opportunity (Smith, 2011). Also, as Cuff's (2017) report suggests, enjoyableness and subject difficulty were important considerations, as was – to a lesser extent – usefulness for future education. Again, student gender did not emerge as an influence. Social desirability may once again have played a role in participants' responses, or student counsellors and tutors were not aware of the role of background variables in their recommendations (Nathan et al., 2010).

General discussion

Summary and discussion of main results

The main purpose of the present case studies was to identify the factors characterising study profile recommendations and the role of students' gender (Case Studies 1 and 2) and SES (Case Study 1) in

this. The product advice – the study profiles that participants perceived as most appropriate – in the first case study were BUSI (twice), ECON, TECH, CARE, and a combination of CULT and ECON. Six of the eight student counsellors and tutors who gave product advice made the same recommendations to all vignette students. The main recommendations in the second case study varied considerably; frequently mentioned were recommending a combination of two profiles, choosing a profile in which the student was most interested, and no recommendation, since a conversation with the students was required.

The main process advice (factors that participants considered important) in both case studies were students' interests and enjoyableness of subjects and study profiles. Moreover, for about three quarters of the student counsellors and tutors, students' marks and keeping future study options open were also important. Two participants explicitly included stereotyped gender differences.

Although this was not the case in the second case study, the first case study resulted in some differences between participants from different tracks. Students' marks were more important considerations for participants from the senior and pre-university tracks than for participants from pre-vocational tracks. At the same time, taking mandatory subjects in most profiles was encouraged more by participants from pre-vocational tracks. They were possibly less concerned that students would not succeed in subjects because they thought that senior and pre-university level subjects were perceived as more difficult and, consequently, students needed to be more talented to succeed in them than pre-vocational education students. This flawed thinking needs further investigation as students in tracked educational systems need to be marked and evaluated in accordance with the track they are in.

One of the main results of the case studies was that product advice was not always given. This resembles the impartial cultivator (Smith, 2011) or non-directive (Hearne & Neary, 2020) models and Resh and Erhard's (2002) aloof schools in the sense that many participating school counsellors and tutors do not see advising as their role. This is in line with the policy of 75% of the participating schools in the study by Van Langen et al. (2006), which tried to influence study profile choices as little as possible. At the same time, most participants can to some extent be seen as mediators of opportunity (Smith, 2011) or as having an encouraging counselling style (Resh & Erhard, 2002) because they stress the importance of individual student's needs.

To find out students' needs and desires, almost all participants reported that they needed to talk with students (the "'technology of confession"' of our inner desires) (Fejes, 2008). In the participants' view of career guidance, dialogue is central as a way of satisfying the individual's needs. The students are made active and responsible for their own choices, while the counsellors and tutors are simply supportive. Thus, in a way, students are to be their own counsellors. By confessing desires to themselves through reflection and self-scrutiny, students govern themselves (Fejes, 2008). With that, most participants favour a protean career attitude: they are intent upon using their own values (as opposed to organisational values) and are self-directed: they take an independent role in managing their vocational behaviour (Briscoe et al., 2006). These career orientations show substantial predictive power for career satisfaction and self-management behaviours and incremental validity over proactivity and self-efficacy (De Vos & Soens, 2008).

One could argue that this focus on students' interests and self-direction also has disadvantages:

> After all, while students may express wonderful things, they may also express very problematic ideas and convictions, so to simply 'accept' any expression because it comes from the student is not just uneducational, but it can actually be problematic and even dangerous. (Biesta, 2020, p. 100)

Moreover, students are obliged to choose, and they have to choose within an imposed framework of goals, norms and functions (Van der Ploeg, 2020). There is also not an endless supply of varied, engaging, well-paid and satisfying education and work to choose from (Bansel, 2007, p. 298). Most students are likely not fully informed about study profile and career opportunities. There is no space for any consideration of the different and inequitable locations of subjects in terms of

familial, cultural or socioeconomic privilege or disadvantage, or of age, education, gender, class and ethnicity (Bansel, 2007, p. 298). In some students, this discourse of choice causes a sense of personal failure to prioritise their commitment to study what they want over their lives and institutional survival and pressures (Matusov & Marjanovic-Shane, 2017), i.e. when the individual cannot choose, or has no real choices to make (Bansel, 2007, p. 298). It probably does not even occur to students that their problems could also be understood as problems of education (Van der Ploeg, 2020).

Implications for further research

To our knowledge, the present case studies are the first vignette studies about the role of school employees in study profile choices. In spite of the small sample size, the case studies provide a fruitful exploration for refining the use of vignettes in this context. The fact that participants treated vignette students as if they were real students suggests that vignettes can be appropriate for measuring considerations of educational pathways.

Some recommendations for future vignettes can be made in the light of our results. Vignettes should be meaningful to the participants (Skilling & Stylianides, 2020), given that the participants were more accepting of the vignettes in case study 2, in which students tried to choose one of two study profiles or subjects. Moreover, more information on students' personal and academic situations should be incorporated into vignettes to increase participants' willingness to participate. In contrast, including students' gender and SES was generally met with resistance, as many participants stated that they absolutely do not take these factors into account. The present study did not provide an explanation for the large gender differences in Dutch study profile choices (Onderwijs in Cijfers, 2021; Statistics Netherlands, 2021, see Appendix). Social desirability may have played a role, or participants were not aware of (subtle) differences in how they deal with students. Observation of profile choice conversations and classes or different vignettes could be used to find out if differences in guiding study profile choices can help explain differences in girls' and boys' choices. Anthropomorphic technology (i.e. Pak et al., 2014), using computer simulations or avatars, might make vignettes even more tacit and realistic.

Apart from vignette studies, more research is needed into guiding study profile choices. One would expect student counsellors and tutors to help students with their choices. However, it appeared that making product recommendations is not how most of them tend to work. This raises the question of what their guidance does involve and to what extent this is in accordance with students' needs.

Future research could also consider students' experiences with study profile guidance. In a way, students are thrown back upon themselves, which does not seem to be in line with their needs, since many students appear to take teachers' or counsellors' recommendations into account (i.e. Cuff, 2017; Jin et al., 2011; Van Langen et al., 2006).

Data availability statement

Due to the nature of this research, participants of this study did not agree for their data to be shared publicly, so supporting data is not available.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by the Netherlands Initiative for Education Research [Grant number 405.17.303.2926].

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Appendix: Study profile choices in the Netherlands

Table A1. Study profile choices of the combined, middle-management and basic tracks students in pre-vocational education in 2019 in %.

Study profile	Combined track $N = 27967$	Middle-management track $N = 54989$	Basic track $N = 33265$
Building, housing and interiors	2.23	6.21	7.37
Engineering, fitting out and energy	3.84	9.48	10,56
Transport and mobility	0.57	0.37	0.53
Media, design and IT	2.25	3.32	1.89
Maritime and technology	0.57	0.37	0.53
Care and welfare	9.59	25.82	25.97
Business and commerce	7.23	14.41	11.29
Catering, baking and leisure	1.30	4.96	5.44
Animals, plants and land	16.57	11.72	15.64
Services and products	55.87	23.34	20.78
Others	0	0.52	0.82

Source: https://www.onderwijsincijfers.nl/kengetallen/vo/leerlingen-vo/vakken–profielen-profielen-vo.

Table A2. Study profile choices of theoretical track pre-vocational students in 2019 in %.

Study profile	Theoretical track $N = 78325$
Business	51.90
Agriculture	2.51
Engineering & technology	17.53
Care & welfare	28.06

Source: https://www.onderwijsincijfers.nl/kengetallen/vo/leerlingen-vo/vakken–profielen-profielen-vo.

Table A3. Study profile choices of male and female senior general track students with different parental migration backgrounds in 2019 in %.

	Total		Dutch		Turkish		Moroccan		Surinamese		Antillean	
	girls $N = 29756$	boys $N = 26743$	girls $N = 23400$	boys $N = 21208$	girls $N = 648$	boys $N = 563$	girls $N = 1000$	boys $N = 769$	girls $N = 642$	boys $N = 495$	girls $N = 236$	boys $N = 181$
Culture and society	17.27	4.84	17.14	4.80	16.51	2.13	15.10	4.29	19.78	6.67	24.58	4.42
Economy and society	39.22	50.16	39.54	50.70	39.97	55.06	47.10	59.69	42.68	51.11	35.17	45.86
Science and health	28.29	19.25	29.17	19.48	28.55	16.34	26.00	19.12	22.27	20.20	25.00	24.86
Science and technology	4.51	15.84	4.58	16.23	3.70	14.92	2.80	10.66	3.74	11.52	4.24	17.13
Combination CS-ES	3.38	0.95	3.39	0.92	4.01	1.78	2.60	0.52	5.30	1.21	5.51	1.12
Combination SH-ST	6.03	7.55	5.92	7.62	6.64	9.06	6.20	5.59	5.45	8.69	4.66	6.08
Other combinations	0.02	0.01	0.02	0.02	0	0	0	0	0.16	0	0	0

Source: https://opendata.cbs.nl/statline/#/CBS/nl/dataset/80040ned/table?ts=1591279941111.

Table A4. Study profile choices of male and female pre-university track students with different parental migration backgrounds in 2019 in %.

	Total		Dutch		Turkish		Moroccan		Surinamese		Antillean	
	girls $N = 21850$	boys $N = 18692$	girls $N = 17433$	boys $N = 14849$	girls $N = 266$	boys $N = 247$	girls $N = 355$	boys $N = 303$	girls $N = 338$	boys $N = 286$	girls $N = 124$	boys $N = 114$
Culture and society	11.56	3.27	11.77	3.33	7.89	2.83	7.32	2.97	14.20	2.80	12.90	1.75
Economy and society	20.82	28.83	21.96	30.53	17.67	24.70	16.34	27.39	15.68	24.13	23.39	32.46
Science and health	26.11	16.01	26.34	15.79	30.45	20.24	32.68	21.45	27.51	20.63	20.16	21.93
Science and technology	11.18	24.94	11.40	25.18	12.03	22.67	7.32	22.44	10.36	23.78	11.29	25.44
Combination CS-ES	8.66	6.14	8.55	6.40	6.02	8.91	11.83	5.61	13.31	4.90	12.10	1.75
Combination SH-ST	19.11	18.24	19.25	18.07	23.31	17.00	23.66	18.81	17.75	21.68	18.55	14.91
Other combinations	0.15	0.09	0.15	0.11	0	0	0	0	0	0	0	0

Source: https://opendata.cbs.nl/statline/#/CBS/nl/dataset/80040ned/table?ts=1591279941111.