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## Supporting student retention in distance learning by designing motivating course completion methods

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### Abstract

An important challenges for higher education distance learning is to support course completion. In a previous study, we mapped the significance of known course completion risk factors in different (non)completion stages: 1. not initiated, 2. abandoned, 3. submitted but failed, and 4. successfully completed. Our findings indicated that not initiating was explained by available time, low motivation, and inappropriate completion methods. Task abandonment was predicted by life situation as well as inappropriate completion methods. Failed submissions were associated with task difficulty level and poor availability of the learning material.

As studying gets abandoned at each completion stage for different reasons, countermeasures need to be well targeted. The data from our previous study suggests that, at the initial stages, supporting study motivation by designing suitable course completion methods seems like the most effective measure to counteract noncompletion risk. At the later stages, academic skills increased their significance for course completion.

We discuss how course completion design and study motivation can be improved in combination using the psychological self-determination theory of motivation. According to the theory, intrinsic study motivation and engagement require experiencing competence, autonomy, and communality. We present our tested completion method designs supporting students' experience of these basic human needs. In conclusion, we suggest that course completion may be best supported by flexible distance learning and completion methods that provide constructive feedback and encourage a sense of communality among students.

**Keywords:** please add your keywords without capitals here, separated by commas.

### 1. Introduction

The contemporary policies of lifelong learning in education together with digitalization and the COVID-19-pandemic lockdown restrictions have required increasing flexibility from higher education. The selection of available courses to potential students has widened considerably. Open universities have been at the leading edge of this development due to their demographically and residentially diverse student populations. Instead of classroom exams, students complete their courses in distance learning environments with electronic study materials and completion methods.

Designing distance learning, however, requires more investment and staff competence from the organization due to technological requirements (Tu & Corry, 2002). Students enjoy greater freedom but need to bear greater responsibility of themselves during studies. The increased requirements, however, have resulted in declines in quality of technological (Aydın et al., 2019; Gaytan, 2015) and pedagogical implementation (Lee &

Choi 2011; Lee et al., 2013), study performance (Alqurashi, 2019), study skills (Bağrıacık Yılmaz & Karataş, 2022; Yukselturk et al., 2014), social contacts, support and communality (Lee & Choi, 2011), as well as study motivation (Maunula et al. 2021), due to which distance learning suffers from lower student retention levels compared to face-to-face learning. Moreover, adult distance learners have reported trouble reconciling studies with work life (Yukselturk & Inan, 2006; Maunula et al. 2021).

Efficient student retention measures require detailed understanding about course completion risk factors. In our previous study (under review), we mapped the significance of these student retention risk factors in different stages of course completion. Our aim was to help targeting the most effective countermeasures at each stage. We expected that course completion risk factors may differ at different stages of study. We will focus on the risk factors that can be affected by pedagogical solutions.

Our approach to this issue is above all practical: to support as efficiently as possible course completion in distance learning. Targeting appropriate countermeasures requires detailed data about the risk factors' effects at each study completion stage. Instead of formulating specific hypotheses, we explored course completion risk factors in further temporal detail than done in previous studies: We investigated study engagement risk factors in four different course completion stages. Finally, we will discuss practical but science-based suggestions for supporting course completion at different stages. We will specifically discuss how to apply an influential theory of study motivation in improving completion rates by pedagogical course design (Ryan & Deci, 2017, 2020). According to the theory, genuine interest in studies depends on the amount of student's experienced competence, autonomy, and social support. We argue based on our results that genuine interest can be the most effectively fostered by designing appropriate completion methods.

We measured basic studies psychology students' self-reported levels of study engagement risk factors during their study progress and their reported course completion performance at four stages (Kember, 1995):

1. Not initiated,
2. Abandoned (initiated but not submitted),
3. (submitted but) Failed
4. Completed.

Eleven risk factors were included:

1. Life situation
2. Available time for studies
3. Study motivation.
4. Course completion method
5. Instructions
6. Formative feedback
7. Difficulty level or academic skills
8. Learning material
9. Material availability
10. Learning environment
11. Study schedule

The risk factors changed stage-by-stage, as presented in Figure 1.

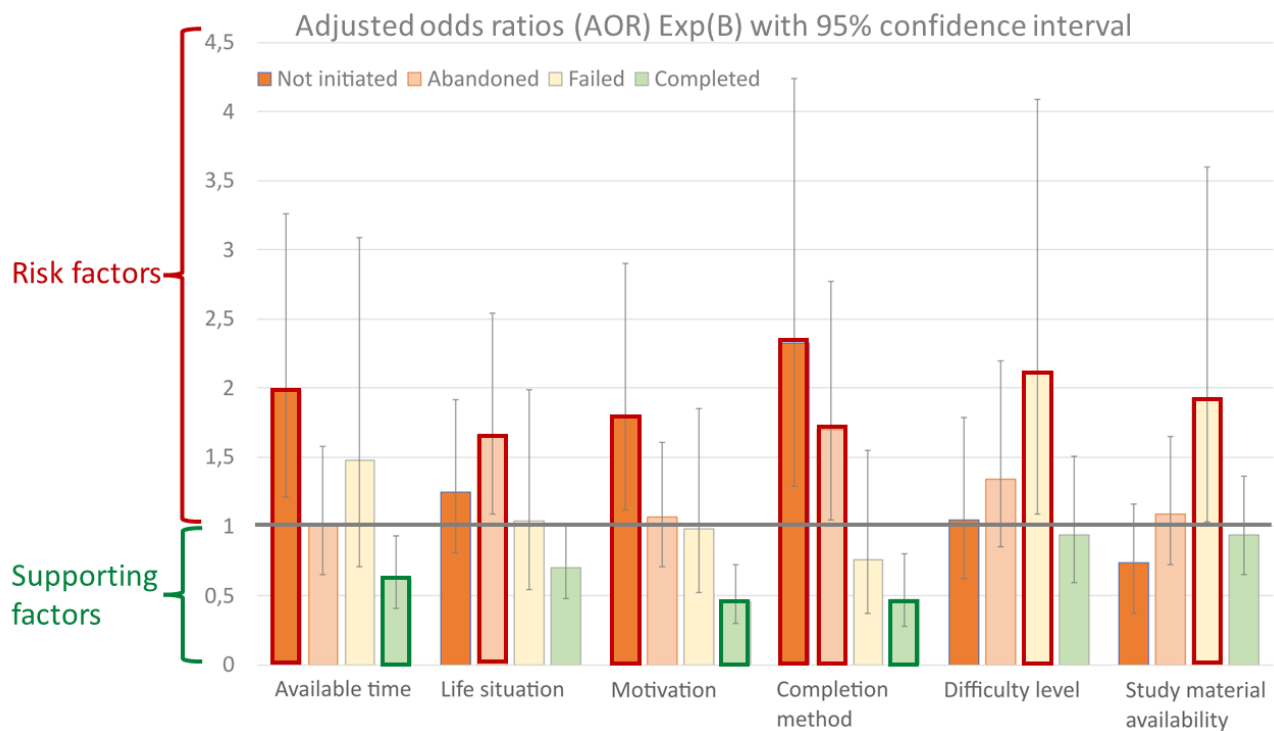


Figure 1: Adjusted odds ratios (AOR) Exp(B) for each risk factor at each completion stage with 95% confidence interval. AOR = 1 no effect, AORs > 1 indicate elevated noncompletion risk, and AORs < 1 increased completion level. Statistically significant odds ratios highlighted.

The most critical risk factor of not initiating course completion – and the supporting factors for completion – are time available for studying, study motivation and the course completion method. In this article, we focus especially on motivation and how it can be pedagogically supported in course completion design.

## 2. Motivation and course completion method design

### 2.1 Motivation

In addition to students' general wellbeing and functioning, their study engagement and course completion levels depend highly on their study motivation level (Johansen et al, 2023; Vansteenkiste et al., 2006; Walker et al., 2006). For interpreting this phenomenon, we need a helpful conceptualization of motivation. A widely used theory of motivation – also in the academic study context – is the self-determination theory of motivation (Froiland & Worrell, 2017; Howard et al., 2021; Ryan & Deci, 2017, 2020; Vansteenkiste et al., 2006; Walker et al., 2006). According to this theory, there are two relevant motivation types (Deci & Ryan, 2000):

1. Intrinsic (autonomous) motivation: This type motivates practicing an activity for its own sake and pleasure.
2. External (controlled) motivation. This type motivates practicing an activity based on external rewards. It can contribute to autonomous motivation by means of introjection.

Both types of motivation may help study performance in different ways, but it is especially the autonomous motivation that supports students' wellbeing, functioning, study performance and engagement (Johansen et al., 2023). The main crux of the theory is that motivation type 1, intrinsic (autonomous) motivation, depends on satisfaction levels of the basic psychological needs of autonomy, competence, and (positive) communality

(Ryan & Deci, 2017, 2020). The basic need satisfaction works as receiving natural primary rewards from an activity. The greater the need satisfaction level, the greater the intrinsic motivation level to an activity (Hope et al., 2019). As a result, motivation is strongly associated with self-efficacy (Duchatelet & Donche, 2019) and engagement to an activity (Murillo et al., 2018). Therefore, this is the relevant motivation type for understanding study engagement.

## 2.2 Supporting motivation in course completion method design

The major observation based on our results was that the risk factors differ greatly across different completion stages. From a pedagogical perspective, the most critical observation was that the risk factor of not initiating course completion and the supporting factors for completion are the same: available time, study motivation and the course completion method design. At other stages, the risk factors are more specific, like poor availability of study material, or immune to possible countermeasures, such as a suddenly changed life situation.

Since the amount of available time for studies is counteracted in a relatively straightforward fashion, we shift our focus on supporting study motivation and course completion method design. Moreover, it turns out that study motivation can be effectively supported by measures relevant to course completion method design. In effect, course completion method design greatly benefits from pedagogical formats fostering study motivation. As an interim conclusion, the most effective way of supporting course completion and student retention seems to be focusing on how to support study motivation by completion method design. This is how we have developed the pedagogy at our institute, and in the following, we will describe these development measures.

We will divide the measures of study motivation support into three broad categories based on the basic needs described in the self-determination theory. We describe how, first, the sense of competence, second, the sense of autonomy, and third, the sense of communality can be supported by appropriate completion method design.

### Competence

Competence means being good enough at performing a given activity. An individual's sense of competence is closely related to self-efficacy, meaning being able to act in an appropriate manner to achieve a goal and believing so. Sense of competence for an open higher education student could mean that he or she feels she is able to learn the course topics, and eventually to complete the course. In addition to perceiving the study topic inherently valuable and interesting, the student feels motivated to study when performing well, and when perceiving improvement in studies; learning is a powerful natural reward for human individuals.

Self-efficacy is also related to learning related emotions such as curiosity and enthusiasm (Camacho-Morles et al., 2021; Chen et al., 2022; Løvoll et al., 2017). These positive emotions facilitate memory trace formation (Kang et al., 2009; Duan et al., 2020), and adoption of optimal learning strategies (Muis et al., 2015).

To increase the students' sense of competence, the completion method should include individual feedback facilitating improvement and progression monitoring. Teachers' verbal feedback should target improvement points and detail the measures the student should take. Students value honest, fair, and constructive feedback (Rae & Cochrane, 2008). We have applied multiple minor assignments with formative assessment in between, and pretesting-testing quizzes, for this purpose.

### **Autonomy**

Autonomy means having a feeling of control over, influence on, or the ability to make decisions about things related to oneself. The sense of autonomy in the context of distance learning in higher education could mean that the student can influence the study schedule, and possibly choose the assignment topic and format. Students value it if they can align and apply the study topic to their own interests (Johansen et al., 2023). Moreover, this enhances the adult students' feeling of being trusted.

At our institute, we have opted for flexibility at multiple levels of the pedagogical formats. Students can begin and finish their courses at their own individual schedules. Multiple completion methods are offered. Some advanced students prefer exams to progress in a fast schedule. We have offered for example online supervision, multiple written assignments or study diaries, group presentation workshops and pretesting quizzes as completion methods for students in need of more guidance with academic skills and the course topic.

### **Communality**

Communality in higher education distance learning can mean the sense of belonging to a given organisation (Merriman, 2010; Won et al., 2017). Interaction between students, and with the teacher, is critical especially in the beginning of studies (Johansen et al., 2023). Students motivate each other and develop motivation regulation skills in interaction with each other (Smit et al., 2017).

In the learning environment, we use inclusive discourse throughout, and we have recorded welcoming introductory interactive videos by teachers to orient and engage the student in the topic and the organization. Discussion forums and social media groups serve as communication platforms for students to support group study. The students may complete the course by group works or participating in presentation workshops with the element of peer assessment.

### **3. Conclusions**

Course completion levels are critical for Finnish open higher education distance learning, as measures of pedagogical quality, and as a source of funding. More broadly in society, digitalization, the need for lifelong learning, and the pressure of higher education to serve work life compel teachers to design shorter study and degree formats (Lauder & Mayhew, 2020), offered in the form of scalable distance learning courses. For these type of studies, low study motivation and engagement levels, external regulation and lack of communality are major challenges. Pedagogical formats aiming at increased study engagement and performance levels in adult distance learners should include a communal learning environment with constructive instructor and peer feedback, and flexibility in schedule and learning methods.

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