

MEASURING SELF-REGULATED LEARNING IN STUDENTS WITH/WITHOUT CARE-RESPONSIBILITIES TO PUSH GENDER EQUITY

Luzi M. Beyer, & Annina Böhm-Fischer

*Department for Methods of quantitative research in social and health care,
Alice Salomon University of Applied Science (Germany)*

Abstract

Online Learning can be an opportunity to improve equity for students with caregiving responsibilities, who are mostly females. However, whether there are differences in learning preferences (e.g., desire for self-directed learning), academic self-assessment (e.g., assessing one's own progress), and motivation to learn (e.g., interest in learning new things) in digital courses is poorly understood. Therefore, it is difficult to address the needs of caregiving students, as their commitments and needs are often invisible in eLearning courses.

For this reason, a self-regulated learning questionnaire (24 questions in total) was compiled from existing questionnaires, supplemented with demographic questions, and collected in 3 consecutive semesters (N = 195).

Unfortunately, not all three facets had acceptable internal consistencies (Cronbach's alpha learning preferences = .654, academic self-assessment = .869, motivation to learn = .670). The intercorrelations were all positive as expected and only the intercorrelation of learning preferences and learning motivation was not significant.

The study revealed that students with care responsibilities (n = 32) do not differ in learning preferences and academic self-assessment. Thus, they cope with the demands of eLearning as well as their peers. However, they had significantly higher learning motivation than students without care-responsibilities (n = 163).

The results suggest that for students, time (rather than learning preferences or self-assessment) is a primary barrier to studying, and institutional awareness of the needs of students with care obligations needs to be raised so that they are not demotivated by unnecessary hurdles. This would improve equity and gender equality.

Keywords: *Student diversity, higher education, elearning, self-regulated learning.*

1. Introduction

One factor that has long caused discrimination is the dissolution of typical successive definable life stages such as study and parenthood (Wilson & Rosen, 1999). There has long been evidence that parenthood, especially for women, leads to a prolongation of studies (Cornelissen & Fox, 2007), poverty during studies, and higher dropout rates (Lörz & Mühleck, 2019). When considering not only caregiving responsibilities for children, but informal caregiving in general (e.g., for elderly, ill, and/or dependents in need of assistance), caregivers in the higher education context are significantly more likely to identify as female overall (Armstrong-Carter et al., 2022). Time is cited as a limiting factor for study by these students (Lindsay & Gillum, 2018). Study difficulties often result from time and formal constraints, compulsory attendance, and submission deadlines (Terzieva et al., 2016).

Current figures also show that caregiving responsibilities during the pandemic have reduced spatial and temporal flexibility and resulted in overlapping responsibilities (Parrish, Negi, & Mogro-Wilson, 2021). To estimate the relevance of the topic for the future, it is also important to consider that the proportion of students with caregiving responsibilities will continue to increase due to demographic changes and cost trends for child care and nursing positions (Schwinger, 2022). These students benefit from inclusive course offerings such as blended learning (Andujar & Nadif, 2022).

If a course offers more flexibility and freedom, this goes hand in hand with the fact that students have to organize and structure themselves independently and learn by themselves. Under the German

concept "Selbstlernkompetenz" (self-learning competence) the abilities and skills for independent planning, realization, evaluation and adaptation of learning processes are united (Aisenbrey, et al., 2003).

2. Methods

The German concept of self-learning competency has great overlaps with the construct "self-regulated learning" (SRL) rooted in cognitive psychology and "self-directed learning" (SDL) rooted in adult education. Therefore, all items of the two established SDL questionnaires (SDLRS and OCLI) as well as two accepted questionnaires to assess SRL (MSLQ and LASSI) were included in the primary item pool. Furthermore, the two German questionnaires KKB and KL-SLK were included in the primary item pool. In a joint iterative workshop of the authors, items focusing on motivation, metacognition, and self-regulation were extracted, outdated wording was removed, and duplications were eliminated. The final questionnaire had 24 questions in total (9 questions on learning motivation, 9 questions on learning-related self-assessment/metacognition, and 6 questions on learning preferences/self-regulation) and was supplemented with demographic questions and questions about caregiving responsibilities as well as work commitments and other stresses (e.g., chronic illnesses). Due to data protection regulations, the questions were voluntary and could only be answered with "yes/no" as the response format. In three consecutive semesters (summer semester 2021 and 2022 and winter semester 2021), 201 questionnaires were collected, 195 of which were filled out with questions about caregiving responsibilities (N = 195).

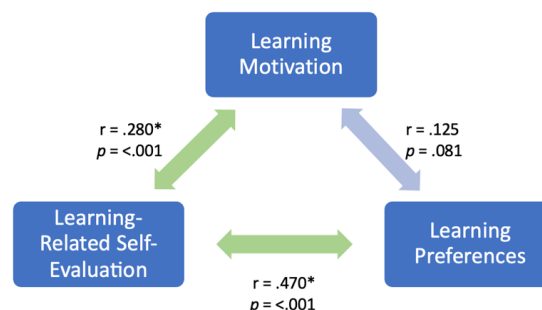
3. Results

The learning motivation scale achieved an internal consistency of .670 (Cronbach's alpha, N = 195) when all 9 items were evaluated together. Omitting the ninth item ("I study because I have to take an exam.") could increase the internal consistency to .691 (Cronbach's alpha, N = 195).

The Learning-Related Self-Assessment scale (9 items, N = 194) had a Cronbach's alpha of .869, which would not be increased by omitting individual items.

The scale Learning Preferences (6 items, N = 194) contains one item that is negatively poled in terms of content (desire for self-directed learning) ("For me, a predetermined structure is helpful."). This item was re-poled before further calculations. The Learning Preferences scale (6 items) had a Cronbach's alpha of .654, which would increase to .666 if one item ("For me, a predetermined structure is helpful.") was omitted. The shortened Learning Motivation scale had an overall mean of 4.64 (SD = 0.88, N = 195), Learning-Related Self-Evaluation had a mean of 4.66 (SD = 1.04, N = 194), and the shortened Learning Preferences scale had a mean of 3.25 (SD = 0.62, N = 195). The shortened total learning motivation scale (8 items), the learning-related self-assessment scale (9 items), and the shortened total learning preferences scale (5 items) were used to calculate intercorrelations. The Learning Motivation scale correlated significantly positively with the Learning-Related Self-Evaluation scale ($r = .280$, $p < .001$, N = 194). Learning-Related Self-Evaluation correlated significantly positively with Learning Preferences ($r = .470$, $p < .001$, N = 194). As expected, the correlation of the scales Learning Motivation and Learning Preferences is mildly positive but not significant ($r = .125$, $p = .081$, N = 195, see Figure 1).

Figure 1. Intercorrelations of the three scales incl. significances (significant intercorrelations are green, non-significant intercorrelations are grey).



The subsequent t-test compared students with care responsibilities (n = 32) with students without care responsibilities (n = 163). This showed that students with and without care responsibilities do not differ in their learning preferences $t(193) = -0,629$, $p = .265$, and in their academic self-assessment, $t(192) = -0,680$, $p = .249$. However, students with care responsibilities had significantly higher learning motivation than students without care responsibilities, $t(193) = -1,851$, $p = .033$.

4. Discussion / conclusions

It is worth discussing that two of the three scales have only insufficient internal consistencies. This is regrettable, but unfortunately not surprising. For example, the LASSI has some inconsistent and unstable scales (Flowers, 2003), in the OCLI the factor structure is unclear (Mottonen, 2019), in the MSLQ the reliability coefficients are sometimes low (Taylor, 2012), and the postulated component structure of the SDLRS has not been empirically confirmed (Straka, 1995).

The insufficient internal consistencies are worth discussing. They could be responsible for the fact that the intercorrelation between the scales learning motivation and learning preferences did not become significant. Furthermore, it is possible that the t-test only became significant for one facet of self-learning competence because of the lack of internal consistency. Nevertheless, the results suggest that students with supervisory responsibilities cope with the demands of eLearning just as well as their peers, and they are highly motivated.

Together with the current results, this raises the question of whether self-reports are suitable for exploring self-regulatory processes and perceptions. Furthermore, the question arises whether and to what extent (internal and external) processes and (non-) learnable competencies can be researched independently of each other. The difficulty of this distinction is also shown by the sometimes synonymous use of the terms "self-regulated learning" (SRL) and "self-directed learning". It is therefore concluded that the acceptance of diversity by students is extremely important, because only when difficult learning situations are taken into account, a university is inclusive. Diversity should not only be seen as an advantage by the students themselves but there should be more awareness of the actual benefits to all students as well as to the university and research should continue to be done to ensure that diversity does not lead to disadvantages.

References

- Aisenbrey, P., Dürr, W., Heinz, W., Jäger, R., Jäger-Flor, D., Knoll, J., & Nicklas, F. (2003). 2. Zwischenbericht der wissenschaftlichen Begleitung des BLK-Modellversuchsprogramms „Lebenslanges Lernen“.
- Andujar, A., & Nadif, F. Z. (2022). Evaluating an inclusive blended learning environment in EFL: a flipped approach. *Computer Assisted Language Learning*, 35(5-6), 1138-1167.
- Armstrong-Carter, E., Panter, A. T., Hutson, B., & Olson, E. A. (2022). A university-wide survey of caregiving students in the US: Individual differences and associations with emotional and academic adjustment. *Humanities and Social Sciences Communication*, 9(1), 1-10.
- Cornelissen, W., & Fox, K. (2007). *Studieren mit Kind: Die Vereinbarkeit von Studium und Elternschaft: Lebenssituationen, Maßnahmen und Handlungsperspektiven*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Flowers, L. A. (2003). Test-retest reliability of the learning and study strategies inventory (LASSI): New evidence. *Literacy Research and Instruction*, 43(1), 31-46.
- Lörz, M., & Mühleck, K. (2019). Gender differences in higher education from a life course perspective: transitions and social inequality between enrolment and first post-doc position. *Higher Education*, 77(3), 381-402.
- Mottonen, A. L. (2019). Self-Directed Learning: A Unitary Or Multidimensional Construct? *Conference of the Canadian Society for the Study of Education*.
- Parrish, D. E., Negi, N., & Mogro-Wilson, C. (2021). The hidden cost of caregiving during the pandemic. *Journal of Social Work Education*, 57(2), 211-214.
- Ruff, L. (2021). *Examining the Experiences of Social Belonging and Campus Integration for Parenting Undergraduates*. Capella University: Doctoral dissertation.
- Schwinger, A. (2022). Die Langzeitpflege nach der Wahl: Kommt sie nun, die „große Pflegereform“? *Gesundheits- und Sozialpolitik (G&S)*, 75(6), 50-57.
- Straka, G. A. (1995). *Problems of Measuring Self-Directed Learning Readiness*.
- Terzieva, B., Dibiasi, A., Kulhanek, A., Zaussinger, S., & Unger, M. (2016). *Zur Situation behinderter, chronisch kranker und gesundheitlich beeinträchtigter Studierender: Quantitativer Teil der Zusatzstudie zur Studierenden-Sozialerhebung 2015; Endbericht*. Institut für höhere Studien.
- Wilson, S., & Rosen, R. (1999). Work, study, family: Undergraduates with dependent care responsibilities. *The Canadian Journal of Infancy and Early Childhood*, 7(4), 349, 7(4), 349-356.