メタ認知的知識と社会的遠隔オンライン学習者としての自己：
学業的自己概念に関する自己信念合理化の仮想現実支援分析

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Rationale

- 新型コロナウイルスへの対応策として教育現場におけるオンライン学習が実践されている．このような状況において，教育工学を含む教育実践者が，社会的にも遠隔となるオンライン教育の負荷に対する学習者の対処方法，さらに，学習者の自己認識を理解することが大切になる．学習者のメタ認知を扱う研究領域において，非専門技術者的な視点からそのような情報を抽出する方法がある．本研究では，自己信念をメタ認知的知識の一つと捉え，日本の大学のオンライン授業で学ぶ210名の大学生から収集した自己評価データのテーマ分析を行った．テーマ分析の補助としてVR技術が用いられた．学業的自己概念の理由づけとして行為者自身が与える言説的合理化に着目し，形式評価，情意と感情，自己調整，変容的自己認識という4つのテーマを抽出した．本研究のような取り組みによって，教育関係者が，学習者のオンライン学習経験に応じた教育的介入や授業デザインを考える際の基盤を提供できると考える．

- With the implementation of online learning solutions in response to the novel coronavirus (COVID-19), it is important for educational technologists and other practitioners to understand how learners are responding to the demands of socially distanced online learning and how they conceive of themselves within distant spaces and digitalized communities. Research into the metacognitions of learners provides a non-technocratic focal point through which such information can be extracted. Framing learner self-beliefs as a form of metacognitive knowledge, the current article presents a virtual reality assisted thematic analysis of the self-appraisals of 210 socially distanced online learners at a Japanese university. The study focuses on the discursive rationalizations given in service of the academic self-concept. Four themes were identified in the data; formal assessment, affect and emotion, self-regulation, and transformative awareness. Such research provides a platform for pedagogical intervention and course design considerations relative to online learning experiences.

Virtual Reality Collaboration and Thematic Analysis

Figure 1. The virtual reality interaction during part of the thematic analysis

Table 2. Emergent themes and definitions

Theme Label	Theme Definition	Academic Self-Concept	
		Effective	Ineffective
形式評価	Explicit reference to formalized achievement metrics such as course grades, GPA scores and credit.	27/50 (54%)	56/160 (35%)
情意と感情	Explicit reference to affective and emotional attributions such as interests, motivations and considerations relative to learning and the online experience.	3/50 (6%)	27/160 (17%)
自己調整	Explicit reference to the use of self-regulatory processes and management strategies such as planning, goal setting, reviewing, time management, self-control and resource use.	15/50 (30%)	55/160 (35%)
変容的自己認識	Explicit reference to awareness of engagement/agency in higher levels of cognitive activities and/or understanding the need to change approach based on experience.	4/50 (8%)	22/160 (14%)

- Learner beliefs are "**a complex and multilayered collection of viewpoints and voices rather than a well-organized and coherent schema**" (Dufva, 2003, p.146).
- If online learning and students working in distant isolation is to become the new norm then **it is important that educators and students quickly adapt to the respective expectations and demands placed on each stakeholder.**
- While it can be expected that many studies focus on the technological solutions in the short-term, it remains imperative that **technological solutions are enacted within pedagogically sound educational frameworks**.
- The tendency of learning technologists to somewhat sideline theoretical and methodological considerations means that educators **must resist the urge to implement untested technological solutions outside of recognized good practice .**
- Drawing attention to **the metacognitions of learners in relation to metacognitive knowledge and self-appraisal can provide a foundation for learning enrichment** within a supportive distant community.
- Due to the cyclical nature of metacognitions, **heightened awareness and reflective competence can be expected to enrich the metacognitive experience of learning** thus promoting more complex and rich knowledge feedback cycles as the student develops as a learner.
- This is crucial for **encouraging and supporting students who are not accustomed to experiencing academic success**, have naive epistemological beliefs, have turbulent or unstable emotional lives away from school, or who have fared poorly when academic comparisons have been undertaken in relation to achievement outcomes.
- Learning how to **reposition and reappraise the self as a socially distanced online learner within a technology-mediated digital community** is an important part of the educational change currently being witnessed around the world.