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How University Students Understand Learning after a Learning-to-Learn Course: A Reflexive Thematic Analysis of Reflective Portfolios

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Abstract **Original Research Article**

This qualitative study explored how undergraduate students understood learning and interpreted changes in their learning approaches following a compulsory Foundations of Learning course. The study was conducted at the International University of Ulaanbaatar, Mongolia, where the course is offered as a compulsory general education course to undergraduate students across disciplines. Data were drawn from 154 complete reflective portfolios and analysed using reflexive thematic analysis. Reflexive thematic analysis generated four interconnected themes: (1) learning as meaning-making, application, and transformation; (2) becoming self-directed and reflective learners; (3) learning as social, resource-connected, and lifelong practice; and (4) perceived gains in learning and personal development. In their reflections, students contrasted memorisation and reproduction with understanding and application, and described greater awareness and regulation of their learning. They also described learning as extending beyond formal classroom settings through social, digital, professional, and everyday contexts. Students associated these changes with gains in understanding, retention, confidence, persistence, practical competence, and personal development. As these outcomes were self-reported, they should not be interpreted as objectively verified improvements or causal effects of the course. Rather, the findings provide insight into how students understand and experience learning development. By examining students' interpretations rather than assuming demonstrable course effects, the study extends understanding of how learning-to-learn education is experienced in a Mongolian university context.

Keywords: learning conceptions; learning to learn; learning development; self-regulated learning; higher education; Mongolia.

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1. Introduction

Higher education is increasingly expected to prepare students not only with disciplinary knowledge but also with the capacity to continue learning in changing academic, professional, and social environments. Rapid technological development, digitalisation, and the growing availability of information have made the ability to understand, manage, and adapt one's own learning increasingly important. International

educational frameworks accordingly emphasise learner agency, self-regulation, reflection, and adaptability, together with the importance of lifelong learning in navigating uncertain and evolving contexts (OECD, 2019; UNESCO, 2021). Within this broader shift, helping students learn how to learn has become an important dimension of university education.

However, entering higher education does not necessarily mean that students already possess well-developed understandings of learning or effective ways of managing it. Students may arrive at university with learning practices shaped by previous educational experiences, including reliance on memorisation, reproduction of information, teacher direction, or familiar study routines. Research on student learning has long demonstrated that students differ qualitatively in how they understand and approach learning, ranging from orientations focused primarily on reproducing information to those emphasising understanding, meaning, and application (Marton & Säljö, 1976; Entwistle & Peterson, 2004). These understandings are important because students' conceptions of learning are associated with how they approach and engage with learning.

One response within higher education has been the development of courses and programmes that explicitly address how students learn. Such provision may include study skills courses, learning strategies courses, first-year seminars, university success courses, and broader learning-development programmes. Their focus increasingly extends beyond individual study techniques to metacognition, self-regulation, reflection, learner autonomy, and the capacity to adapt learning strategies to different situations. Existing studies have reported changes in students' learning skills following a first-year experience course (Sakurai, 2023) and associations between first-year seminar participation and institutional outcomes such as academic performance and retention (Elobaid et al., 2023). These findings provide evidence of the potential contribution of learning-development education within higher education.

Yet performance and retention indicators cannot fully explain how students make sense of learning-development experiences. A complementary qualitative question concerns how students articulate what learning means and which changes they attribute to their participation. The studies reviewed here provide a rationale for examining these accounts, although they do not establish that students' interpretations have been neglected across the wider literature. Examining these perspectives is important because learning development may involve not only the adoption of particular study strategies but also changes in how students understand learning, regulate their own learning, and recognise learning opportunities across different contexts. Students' own accounts can therefore provide insight into dimensions of learning development that may not be captured through grades, retention rates, or other objective indicators alone.

Reflective accounts are particularly valuable for investigating these subjective dimensions because they allow students to revisit their experiences, articulate their understandings, and describe changes they perceive in their learning practices. Such accounts should not be treated as direct evidence of objectively verified improvement; rather, they provide access to how learners themselves interpret educational experiences and attribute meaning to perceived changes. This perspective is especially relevant when the purpose of a course extends beyond immediate academic performance towards developing more reflective, self-directed, and adaptable learners.

The specific contribution of this study is to examine how conceptions of learning, reported strategy adjustments, recognition of learning resources, and perceived outcomes are connected within the same set of student accounts. This interpretive focus complements research that foregrounds institutional outcomes, without assuming that reflective accounts measure learning gains.

The present study addresses this issue within the context of the Foundations of Learning course at the International University of Ulaanbaatar (IUU), Mongolia. The course is a compulsory one-credit general education course offered to undergraduate students across academic

disciplines and is designed to develop students' understanding of learning while introducing concepts and practices related to metacognition, self-regulated and self-directed learning, reflection, effective learning strategies, and lifelong learning. Rather than evaluating the course solely through academic performance or other institutional indicators, the present study examines students' reflective accounts to understand how they conceptualise learning and what changes they perceive in their approaches to learning after completing the course. In doing so, the study provides context-specific evidence from Mongolian higher education and contributes to the broader discussion of how learning-to-learn education may be experienced and understood by university students.

Accordingly, the study addresses the following research questions:

1. How do students conceptualise learning after completing the Foundations of Learning course?

2. What changes in learning approaches do students perceive after completing the course?

2. Literature Review

2.1. Learning in Higher Education

2.1.1. The Changing Mission of Higher Education

Higher education has traditionally been regarded as a means of generating knowledge, preparing skilled professionals, and contributing to economic and social development. For much of the twentieth century, universities primarily focused on transmitting disciplinary knowledge and equipping graduates with specialised expertise for professional practice. Within this paradigm, educational quality was largely evaluated by the extent to which students acquired subject-specific knowledge and successfully completed academic programmes.

However, rapid technological advancement, globalisation, digitalisation, and increasingly complex social and labour-market demands have substantially broadened the role of higher education. The unprecedented growth of information and the emergence of artificial intelligence have changed the contexts in which knowledge is created, accessed, and applied (OECD, 2019; UNESCO, 2021). Consequently, higher education is increasingly expected to develop not only disciplinary knowledge but also broader competencies such as adaptability, critical thinking, collaboration, creativity, and the capacity for continued learning (OECD, 2019).

This transformation has prompted a reconsideration of the purpose of university education. Barr and Tagg (1995) conceptualised this shift as a movement from an *instruction paradigm*, centred on the delivery of instruction, towards a *learning paradigm*, in which the central focus is student learning. This orientation has subsequently developed into a broader emphasis on student-centred learning, which positions students as active participants in the learning process and places greater emphasis on learner agency, autonomy, and meaningful engagement (Bremner, 2021). More recent research indicates that student-centred learning remains an important orientation in higher education, with increasing attention to collaborative learning, competency development, and students' interactions with teachers, peers, content, and digital learning resources (Otto et al., 2024).

International educational frameworks further reinforce this broader mission. The OECD Learning Compass 2030 identifies learner agency, self-regulation, and reflection as important capabilities for navigating uncertain and changing environments, while UNESCO emphasises continuous learning, adaptation, and responsible participation in society as important educational priorities (OECD, 2019; UNESCO, 2021). Taken together, these developments suggest that the contemporary mission of higher education extends beyond the transmission of disciplinary knowledge to developing students' capacity to learn, adapt, and continue developing beyond formal education.

2.1.2. The Changing Concept of Learning

The evolving mission of higher education has been accompanied by a broader understanding

of learning itself. Earlier perspectives, particularly those influenced by behaviourism, often emphasised the acquisition and reproduction of knowledge or observable changes in behaviour. Although knowledge acquisition remains an important educational objective, contemporary theories conceptualise learning as a more active and multidimensional process.

Constructivist perspectives position learners as active participants in the construction of knowledge rather than passive recipients of information. Learning occurs as individuals interpret new experiences, connect them with prior knowledge, and construct meaning through interaction with their environment. Biggs and Tang (2011) emphasise that meaningful learning involves active engagement, connections between new and existing knowledge, and the application of understanding in relevant contexts. Similarly, Illeris (2009) conceptualises learning as involving interconnected cognitive, emotional, and social dimensions.

Research on how students approach learning further demonstrates qualitative differences in their orientation towards learning. Marton and Säljö (1976) distinguished between approaches focused primarily on reproducing information and those oriented towards understanding meaning. These differences are important because students' conceptions of learning are associated with how they approach learning: conceptions centred on the reproduction of information tend to be associated with surface approaches, whereas those centred on understanding and meaning-making are more closely associated with deeper engagement (Entwistle & Peterson, 2004).

This broader understanding of learning also shifts attention towards learners' capacity to understand and manage their own learning. Rather than assuming that students enter university already knowing how to learn effectively, learning itself can be viewed as a capability that can be deliberately developed. This perspective is reflected in the concept of learning to learn, which broadly refers to learners' capacity to initiate, organise, monitor, evaluate, and adapt their own learning.

Learning to learn extends beyond the use of individual study techniques. It encompasses awareness of one's learning processes, regulation of cognitive and motivational activities, reflection on learning experiences, and the ability to adjust strategies in response to different learning demands. The European Parliament and Council (2006) identified learning to learn as one of the key competences for lifelong learning, emphasising the capacity to pursue and persist in learning and to manage time, information, and learning activities effectively.

From this perspective, learning can be understood not simply as the accumulation of information but as an active and developmental process through which individuals construct understanding, apply knowledge, reflect on experience, and progressively develop greater control over their own learning. If such capacities can be developed rather than simply assumed, higher education has an important role in providing opportunities for students to examine how they learn, reflect on their learning practices, and develop more effective and autonomous approaches. This perspective provides a rationale for explicitly supporting students' learning development, while leaving open the empirical question of how students experience such provision.

2.2. Learning Development Courses in Higher Education

Learning development courses represent one curricular response to the recognition that students' capacity to learn can be intentionally developed. Although their titles, structures, and content vary across institutions, such courses generally aim to help students become more effective and independent learners rather than focusing primarily on the acquisition of knowledge within a specific academic discipline. They may take the form of study skills courses, learning strategies courses, first-year seminars, university success courses, or broader learning development programmes.

Traditionally, learning support in higher education often focused on practical academic

skills such as note-taking, academic reading, examination preparation, time management, and information literacy. More contemporary approaches have broadened this focus to include students' understanding and regulation of their own learning. Accordingly, learning development may encompass metacognitive awareness, self-regulation, reflection, learner autonomy, goal setting, and the development and adaptation of effective learning strategies. This broader orientation reflects a shift from providing students with isolated study techniques towards helping them understand how they learn and develop greater control over their learning.

Research on first-year seminars and related learning-development initiatives has demonstrated a range of positive student outcomes. Sakurai (2023), for example, reported improvements in students' learning-related knowledge and confidence, together with reduced concerns about university life, following participation in a compulsory first-year experience course at a Japanese university. Similarly, Elobaid et al. (2023) found higher retention rates and academic performance among students who successfully completed a compulsory first-year seminar course. Earlier research has also highlighted the contribution of educational practices and institutional support to student engagement, persistence, and success in higher education (Kuh, 2008; Tinto, 2012).

Although these findings provide important evidence regarding the potential value of learning-development initiatives, much of the existing research has assessed their effectiveness through specific learning, academic, or institutional outcomes, such as academic performance, retention, engagement, adjustment, or the development of particular learning skills. Such indicators reveal whether desirable outcomes are associated with participation, but they provide less insight into how students themselves understand learning and interpret changes in the ways they learn.

This distinction is particularly important for courses whose aims extend beyond immediate academic performance. If learning development involves greater awareness of learning, reflection, autonomy, and the capacity to apply learning principles across contexts, evaluating such courses also requires attention to students' own interpretations of their learning experiences. Students' accounts can provide insight into whether they have reconsidered what learning means, how they describe changes in their learning practices, and how they perceive the application of these changes in their academic and everyday lives.

The present study addresses this dimension by examining students' reflective accounts following completion of a Foundations of Learning course. Rather than evaluating the course solely in terms of academic or institutional outcomes, it investigates how students conceptualise learning and what changes they perceive in their approaches to learning.

2.3. Student Perceptions of Learning and Perceived Learning Outcomes

Students' perceptions are particularly relevant to learning-development education because how students understand learning can influence how they engage with learning experiences. Research on approaches to learning has demonstrated important relationships between learners' understandings of learning and the ways in which they approach academic tasks, with meaning-oriented understandings generally associated with deeper engagement and reproduction-oriented understandings with more surface approaches (Marton & Säljö, 1976; Entwistle & Peterson, 2004).

Students' perceptions should therefore not be regarded simply as opinions about education. They provide insight into how learners interpret learning tasks, experiences, and environments and how these interpretations relate to their engagement with learning. Prosser and Trigwell (1999) emphasise the relationship between students' perceptions of their learning environments and their approaches to learning, while Biggs and Tang (2011) similarly highlight the importance of learners' engagement with learning activities in achieving meaningful learning.

A related concept is perceived learning outcomes, which refers here to students' own judgements about what they believe has changed through an educational experience. Such perceptions may concern changes in understanding, learning strategies, attitudes, confidence, or personal development. Perceived learning outcomes are distinct from objective measures such as examination scores or grade point averages: they do not demonstrate that measurable improvement has necessarily occurred, but they can provide insight into forms of educational change as experienced and interpreted by learners themselves.

This distinction matters particularly for learning-development courses that aim to influence students' understanding, reflection, autonomy, and practices as well as academic performance. Examining students' accounts can therefore provide insight into how they make sense of these changes and what significance they attribute to them. Accordingly, the present study focuses on two related dimensions: how students conceptualise learning after completing the course and what changes they perceive in their own approaches to learning.

2.4. Reflection as Evidence of Learning

Reflection provides an appropriate means of examining students' perceptions of learning because it enables learners to revisit their experiences, make sense of them, and articulate changes in their understanding and practice. Schön (1983) established reflection as an important process through which individuals examine and learn from experience, while Boud et al. (1985) conceptualised reflection as a deliberate process of returning to and evaluating experience in order to derive new understanding. Moon (1999) further emphasised the role of reflection in learning by highlighting how reflective activity can help learners connect experience with existing knowledge and meaning.

Within higher education, reflection can serve both as a learning process and as a means through which students articulate their learning experiences. Through reflective activities, students may examine what they have learned, reconsider their assumptions, identify changes in their learning practices, and become more aware of how they approach learning. Recent empirical evidence also supports the educational value of reflection. Guo's (2022) meta-analysis of reflection interventions in higher education found an overall positive effect on student learning outcomes, while also demonstrating that the effectiveness of reflection depends on how reflective activities are designed and supported.

Reflective accounts are particularly relevant when the research interest concerns students' own understandings and perceived changes rather than objective academic achievement. They can provide access to how learners interpret their experiences, what changes they recognise in themselves, and what significance they attribute to those changes. In this sense, reflective writing offers a valuable source of qualitative evidence for examining students' conceptions of learning and their perceived development as learners.

At the same time, reflective accounts should not be treated as direct evidence that measurable learning or behavioural change has occurred. What students report may be influenced by memory, their ability to articulate experiences in writing, the context in which reflection is produced, and a tendency to present their experiences in socially desirable ways. Their value therefore lies not in objectively demonstrating improvement, but in revealing how students themselves understand and interpret their learning experiences and perceived changes.

Accordingly, the present study uses students' reflective portfolios as a source of qualitative data to investigate how they conceptualise learning and describe changes in their approaches to learning after completing the Foundations of Learning course. The analysis does not treat these reflections as direct proof of improved academic performance or objectively verified behavioural change; rather, it examines how students make sense of learning and the changes they perceive in themselves as learners.

3. Research Method

3.1. Research Design

This study adopted a qualitative research design using Reflexive Thematic Analysis (RTA) to examine how university students conceptualised learning and how they perceived changes in their approaches to learning after completing a Foundations of Learning course. The study addressed two research questions: (1) How do students conceptualise learning after completing the Foundations of Learning course? and (2) What changes in learning approaches do students perceive after completing the course? A qualitative design was appropriate because the study sought to explore students' own meanings, interpretations, and experiences rather than test predefined variables or establish causal effects.

RTA was selected following Braun and Clarke's (2021, 2022) approach because it enables the identification and interpretation of patterned meanings across a qualitative dataset while recognising the active and reflexive role of researchers in the production of knowledge. The analysis was primarily inductive, with codes and themes developed through researchers' engagement with students' accounts rather than from a predetermined theoretical framework. Because the course taught concepts such as metacognition and self-regulation, the researchers also considered how course vocabulary might shape the dataset. Relevant theoretical concepts were used subsequently to interpret the patterns identified in the data.

3.2. Research Context and Participants

The study was conducted at the International University of Ulaanbaatar (IUU), Mongolia, within the compulsory one-credit general education course *Foundations of Learning* (Суралцах арга зүй). The course is delivered over eight weeks and is taken by undergraduate students from diverse academic disciplines. Its purpose is to develop students' understanding of how learning occurs and to strengthen metacognition, self-regulated and self-directed learning, reflective practice, effective learning strategies, and lifelong learning competencies. Course activities include lectures, classroom discussions, reflective activities, and opportunities for students to examine and revise their existing learning practices.

More than 200 reflective portfolios were collected during the semester. The analysis included 154 portfolios with complete responses to all three learning-reflection prompts and consent for research use. The exact number collected and the numbers excluded for incomplete responses or lack of consent were not available in the manuscript and require verification before submission. Participants represented a range of academic disciplines, including education, psychology, law, economics, business, social sciences, design, information technology, nursing, Korean studies, and other fields. Because the study focused on patterns of meaning rather than statistical generalisation, cases were included on the basis of the completeness and relevance of the reflective responses rather than through probabilistic sampling.

3.3. Data Collection

Data were drawn from the Learning section of an individual reflective portfolio completed at the end of the eight-week course. The portfolio formed part of the regular course assessment and was designed to encourage students to connect course concepts with their own learning experiences. The Learning section contained three open-ended prompts: (1) "What does learning mean to you?"; (2) "How has this course changed your approach to learning?"; and (3) "Please describe one concrete example that illustrates this change."

The first two prompts corresponded directly to the study's two research questions. The third served as a supporting elicitation prompt, encouraging students to provide concrete examples that elaborated and contextualised the changes described in response to the second prompt. The three prompts were therefore considered together as complementary sources of insight into students' conceptualisations of learning and their perceived changes in learning practices.

Only responses from students who provided consent for their portfolios to be used for research were included in the analysis. Identifying information was removed before analysis. The resulting dataset comprised course-generated reflective accounts rather than researcher-led interview responses. Because the prompts explicitly invited accounts of change and were embedded in an assessed activity, they may have shaped both what students chose to report and how positively they framed their experiences.

3.4. Data Analysis

The analysis followed the principles and iterative phases of Reflexive Thematic Analysis described by Braun and Clarke (2021, 2022). These involved familiarisation with the dataset, systematic coding, generating initial themes, developing and reviewing themes, refining and defining themes, and producing the final analytic account. Although presented sequentially, these phases were recursive rather than strictly linear, with the researchers moving between the data, codes, and developing themes throughout the analytical process.

The responses to the three prompts were initially examined separately in order to remain attentive to the particular focus of each prompt. Meaningful segments of text were coded according to their relevance to the research questions. A single segment could be assigned more than one code when it contained multiple analytically relevant meanings. Coding was primarily inductive and remained closely grounded in students' accounts rather than being organised according to predetermined theoretical categories.

The analysis incorporated both semantic and latent interpretation. Semantic coding attended to explicitly described understandings, practices, and experiences, such as memorising information, practising new knowledge, applying learning in everyday situations, planning study time, or seeking additional information. Latent coding considered broader assumptions and meanings underlying these accounts, including changing understandings of learning, developing learner agency, and increasing awareness of one's own learning processes. Descriptions of students' previous learning practices were retained when they helped clarify the direction of perceived change. Statements concerning improved understanding, retention, concentration, confidence, or efficiency were interpreted as students' perceived outcomes and were not treated as objectively verified improvements.

Following the initial question-specific analysis, patterns identified across the three sets of responses were compared and interpreted in relation to the two research questions. Themes were developed around shared patterns of meaning and refined by repeatedly returning to the original accounts, examining their coherence, distinctiveness, and relevance to the overall research focus. Conceptually related patterns across the three prompts were integrated where appropriate, while analytically distinctive meanings were retained. This process resulted in an integrated thematic structure that was subsequently used to organise the presentation of findings in the Results section.

3.5. Reflexivity and Trustworthiness

The analysis was conducted collaboratively by two researchers who were also instructors of the Foundations of Learning course. This insider position provided familiarity with the course context and students' learning experiences but also required ongoing reflexive attention to how the researchers' expectations, assumptions, and pedagogical roles might shape interpretation. Researcher subjectivity was therefore treated as an inherent part of the analytical process rather than something that could be entirely eliminated.

Both researchers engaged closely with the reflective narratives and recorded preliminary analytic observations during familiarisation and coding. Analytical discussions were used to explore alternative interpretations, question assumptions, examine developing patterns, and refine theme boundaries rather than to achieve coding consensus or calculate inter-rater reliability. Throughout the analysis, the researchers repeatedly returned to the original

student accounts to examine whether developing interpretations were adequately grounded in the dataset.

The researchers sought to strengthen the plausibility and transparency of their interpretation through repeated engagement with student accounts, collaborative critical discussion, and illustrative quotations in reporting the themes. Analytic transparency was supported by documenting the development of the analysis from initial coding through theme development and refinement. Reflexivity was maintained through explicit consideration of the researchers' dual roles as instructors and researchers and through discussion of alternative interpretations. Transferability was supported by providing detailed descriptions of the course context, participants, data source, and analytical procedures.

3.6. Ethical Considerations

The reflective portfolios formed part of the regular course assessment; however, their use for research was separate from their assessment function. Only portfolios from students who provided consent for research use were included in the study. Participation in the research was voluntary, and students were informed that their decision to participate or not participate would not affect their grades or academic standing.

All identifying information was removed before analysis, and the data were treated confidentially and used solely for research purposes. Participant identifiers reported in the Results were replaced with pseudonymous numerical codes (e.g., Student 111) to protect students' identities. Given the researchers' roles as course instructors, particular attention was paid to maintaining the distinction between course assessment and research participation and to minimising the potential influence of the instructor–student relationship on research participation.

4. Results

4.1. Integrated Thematic Findings

Analysis of the 154 reflective portfolios revealed four interrelated themes concerning how students conceptualised learning and how they perceived changes in their approaches to learning. Responses to the first prompt provided insight into students' conceptions of learning, the second addressed perceived changes in their learning approaches, and the third provided concrete examples that elaborated and contextualised these perceived changes. Across the dataset, students often narrated a contrast between earlier reliance on memorisation or teacher direction and their present emphasis on understanding, application, self-regulation, and learning across contexts. Because these comparisons were retrospective, they represent students' constructions of change rather than observed trajectories.

The themes are interpretive patterns constructed through analysis rather than discrete categories into which each student necessarily fits. The four themes were analytically distinct but closely interconnected. Students described learning as becoming more meaningful and applicable rather than primarily reproductive; they reported taking greater responsibility for directing and reflecting on their learning; they recognised learning as occurring through interactions with people, resources, and everyday contexts; and they associated these changes with perceived improvements in understanding, retention, confidence, efficiency, skills, and personal development. The findings can therefore be organised around four interrelated dimensions: reconceptualisation of learning, learner agency and regulation, expanded learning contexts, and perceived development. These dimensions are analytically distinguishable but should not be interpreted as a fixed or linear developmental sequence.

Theme 1. Learning as Meaning-Making, Application, and Transformation

The first theme captures a prominent pattern across the three reflective prompts: students increasingly described learning as understanding, connecting, questioning, practising, applying, and transforming knowledge rather than merely memorising or reproducing information. In response to the first

prompt, students frequently conceptualised learning as an active process through which new information is connected with prior knowledge and developed into understanding, skills, and changes in thinking or behaviour. Their responses to the second and third prompts illustrated how this understanding was reflected in perceived changes in their learning practices.

For example, Student 111 explained that while studying economics, "instead of copying, I ask myself, 'Why does the price increase?' and try to understand it by connecting it with real life." This account illustrates a perceived movement from reproduction towards questioning and contextual meaning-making. Similarly, Student 139 described a change in professional study from simply copying legal provisions to examining "why this law was enacted" and what it was intended to regulate. These examples indicate that students associated meaningful learning not simply with acquiring more information but with understanding relationships, purposes, and applications.

The same pattern appeared in language learning and practical activities. Students described moving from memorising isolated vocabulary or grammatical rules towards using words in sentences, conversations, films, and everyday communication. Others described applying similar principles to cooking, sport, design, programming, and professional practice. Student 129, for instance, described learning HTML and CSS by repeatedly attempting tasks, making errors, correcting them, and practising until able to create a simple webpage independently. Such accounts illustrate how students perceived learning as becoming more meaningful when knowledge could be used, tested, revised, and applied in authentic situations.

Across the three prompts, students' accounts therefore linked changes in their understanding of learning with changes in how they approached learning in practice. Learning was increasingly described not as the reproduction of information but as a process of constructing meaning, developing understanding through experience, and applying knowledge across contexts.

Theme 2. Becoming Self-Directed and Reflective Learners

The second theme concerns students' perceived development of learner agency through greater self-awareness, planning, monitoring, strategy selection, reflection, and deliberate adjustment. Across the reflective accounts, students described becoming more aware of how they learned and more willing to take responsibility for changing approaches they considered ineffective. Rather than assuming that the same learning method would work equally well for everyone, students increasingly reported identifying and adapting strategies according to their own needs and learning contexts.

Student 101, for example, explained that listening alone did not lead to full understanding, whereas taking notes and rewriting difficult material helped the student learn more effectively. Student 100 similarly described identifying the time of day when concentration was highest and deliberately using that period for study. Student 136 reported closing the textbook after completing a section and reconstructing the content from memory using a diagram or oral explanation. This enabled the student to identify which parts were understood and which required further study. These accounts illustrate not only the use of learning strategies but also students' growing awareness of their own learning processes and their attempts to monitor and adjust them.

Students also described changes in how they responded to difficulty and mistakes. Student 116 explained that errors were no longer interpreted as evidence of inability but as opportunities to practise, correct, and improve. Student 132 described initially wanting to abandon a difficult problem but subsequently using independent thinking and online examples until the problem became understandable. Such accounts suggest that students associated taking greater responsibility for learning with persistence, strategic adjustment, and a willingness to continue when initial approaches were unsuccessful.

The integrated findings therefore position self-regulation and reflection as a central dimension

of the changes students perceived in their learning practices. Students did not simply report acquiring additional learning techniques; they described becoming more capable of observing their own learning, evaluating the effectiveness of their approaches, and making deliberate adjustments in response to their learning needs.

Theme 3. Learning as Social, Resource-Connected, and Lifelong Practice

The third theme captures the social, contextual, digital, and lifelong dimensions of learning evident across students' reflections. Students increasingly described learning as extending beyond teachers, textbooks, and formal classroom activities. Their accounts included learning through peers, family members, teachers, colleagues, the internet, digital media, professional experiences, and everyday situations.

For example, Student 95 described developing a clearer understanding of metacognition after discussing the concept with a classmate who offered a simpler explanation. Student 107 reported combining information from teachers and books with internet resources and then strengthening understanding by explaining what had been learned to others. Student 125 described learning English through curiosity and everyday exposure rather than relying on mechanical vocabulary memorisation, while Student 77 reported beginning to watch professional instructional videos on social media that had previously been ignored. These accounts reflect an expanded view of the resources and contexts through which learning can occur, with people, technologies, and everyday experiences becoming recognised as meaningful sources of learning.

The lifelong dimension was also evident in students' descriptions of learning as extending beyond individual courses and continuing through changing experiences and future personal or professional development. The third reflective prompt provided concrete examples of how students reported applying this broader view of learning in everyday and professional settings. Across the accounts, learning was therefore increasingly represented not as an activity bounded by formal education but as an ongoing practice embedded in relationships, environments, work, digital resources, and ordinary life.

Theme 4. Perceived Gains in Learning and Personal Development

The fourth theme captures the outcomes that students themselves associated with the changes described in the preceding themes. Students reported better understanding, stronger retention, greater concentration, improved efficiency, enhanced skills, increased confidence, reduced anxiety, greater persistence, and broader personal development. These accounts were interpreted as perceived outcomes rather than as objective measures of academic achievement or independently verified behavioural change.

Student 115 reported that reorganising the structure of a topic and identifying logical connections reduced the time required to understand the material from approximately five hours to two hours. Student 76 described using collaborative and creative learning activities and experiencing stronger long-term retention. Student 114 reported that producing and speaking short sentences using newly learned English grammar and vocabulary resulted in greater perceived progress than memorisation alone. These examples illustrate how students connected changes in their learning practices with perceived improvements in learning effectiveness, understanding, and retention.

Affective changes were also evident in students' accounts. Students described becoming less afraid of making mistakes, more confident in using what they had learned, more willing to attempt difficult tasks, and less likely to interpret difficulty as an indication of failure. Student 87, for instance, described previously avoiding speaking in front of others but gradually becoming more willing to speak despite concerns that the performance might be imperfect. Such accounts indicate that students perceived changes not only in how they studied

but also in their confidence, persistence, and willingness to engage with challenging learning situations.

Across the reflective accounts, these perceived gains were closely connected with the broader changes represented in the preceding themes. Students associated meaningful understanding, greater learner agency, and the use of expanded learning contexts with improvements in how effectively they learned and with broader personal development. These outcomes should therefore be understood as students' interpretations of their own development rather than as independently measured effects of the course.

4.2. Cross-Prompt Synthesis

Comparison across the three reflective prompts revealed substantial thematic convergence. Students' conceptions of learning were closely connected with the changes they perceived in their learning approaches and with the concrete examples through which they illustrated those changes. Across the dataset, learning was increasingly described as meaningful and applicable, self-directed and reflective, and embedded in social, digital, professional, and everyday contexts.

Taken together, the findings suggest that students perceived changes extending beyond the adoption of individual study techniques. Their accounts reflected a broader reconsideration of what learning means, how responsibility for learning is understood, where learning can occur, and what learning can contribute to their development. The four dimensions were interconnected rather than sequential. They represent patterned interpretations within the portfolios, including possible uptake of the course's conceptual vocabulary, rather than an empirically tested pathway of development.

5. Discussion

The present study examined how undergraduate students conceptualised learning and how they perceived changes in their approaches to learning after completing a Foundations of Learning course. Concrete examples provided in students' reflections were used to contextualise and illustrate these perceived changes. The findings converged around four interconnected dimensions: learning as meaning-making, application, and transformation; becoming self-directed and reflective learners; learning through people, resources, and everyday contexts; and perceived gains in learning and personal development. Taken together, the findings suggest that students perceived changes extending beyond the adoption of particular study techniques to a broader reconsideration of what learning means, how they approach and regulate learning, where learning can occur, and what learning can contribute to their development. The following sections interpret these findings in relation to existing literature and consider their theoretical and practical implications.

5.1. From Reproduction to Meaning-Making and Application

A central interpretive pattern was students' retrospective contrast between reproduction-oriented study and learning understood as questioning, application, and meaning-making. Students frequently contrasted earlier practices, such as copying notes, memorising vocabulary, learning rules for examinations, or reproducing textbook content, with approaches involving explanation, contextualisation, practice, questioning, and application. This pattern is closely aligned with the distinction between surface and deep approaches to learning identified by Marton and Säljö (1976) and later discussed by Entwistle and Peterson (2004). Whereas surface approaches tend to emphasise the reproduction of information, deeper approaches are more strongly oriented towards understanding meaning and relationships. Students' accounts similarly linked their changing understandings of learning with reported changes in how they approached study.

The findings further illustrate how this orientation towards meaningful learning was perceived across disciplinary and everyday contexts. Students described applying similar learning principles to economics, law, language learning, design, programming, sport, cooking, and professional practice. Student 111, for example, described moving from copying economic content to asking why prices increase and connecting the concept with real-life situations. Student 129 similarly described learning HTML and CSS through repeated attempts, errors, correction, and practice until independent performance became possible. These examples are consistent with Biggs and Tang's (2011) emphasis on active engagement, the construction of meaning, and the application of understanding. They also resonate with Illeris's (2009) multidimensional view of learning, in which learning involves more than the acquisition of content alone.

A particularly important aspect of this finding concerns the criteria students appeared to use in judging whether learning had occurred. Some reflections contrasted completing assignments or remembering information with being able to explain, apply, transfer, or revise what had been learned. Student 99, for example, explicitly questioned whether task completion or remembering information alone constituted learning and instead emphasised understanding, application, and the ability to learn from mistakes. This suggests a perceived shift from viewing learning primarily in terms of task completion or information reproduction towards evaluating learning through understanding and use. Such an orientation is broadly consistent with Barr and Tagg's (1995) learning paradigm, which shifts attention from the delivery of instruction towards what students actually learn and are able to do.

5.2. From Being Taught to Self-Directed and Reflective Learning

The second major finding concerns learner agency. Students did not simply report acquiring a collection of new learning techniques; many described becoming more aware of how they learned, recognising ineffective habits, selecting strategies suited to their needs, monitoring their understanding, and adjusting their approaches. Student 101, for example, recognised that listening alone did not lead to sufficient understanding and reported that taking notes and rewriting difficult material was more effective. Student 100 identified the period of the day when concentration was strongest and deliberately used that time for study. Student 136 described closing the textbook and reconstructing material through diagrams or oral explanation to identify what had been understood and what required further study. Such accounts reflect metacognitive processes of monitoring, evaluation, and regulation rather than the simple use of isolated learning strategies.

This pattern is consistent with Zimmerman's (2002) conceptualisation of self-regulated learners as active participants in their own learning who select strategies, monitor their performance, and regulate cognitive, motivational, and behavioural processes. It also corresponds with the emphasis on learner agency and self-regulation within the OECD Learning Compass 2030 (OECD, 2019). Importantly, students' descriptions of agency extended beyond choosing study strategies. Student 132, for example, described persisting with a difficult problem by seeking additional explanations and examples rather than abandoning it, while Student 116 described reframing mistakes as opportunities for correction and improvement. These accounts suggest that students associated greater responsibility for learning with persistence, strategic adjustment, and a willingness to respond differently when initial approaches were unsuccessful.

Within students' narratives, conceptions of learning, metacognitive awareness, and reported practices were closely intertwined. The data cannot determine which preceded or produced the others. Students who described greater awareness of how they learned also frequently reported evaluating the effectiveness of their

existing strategies and making deliberate adjustments. From this perspective, the educational value of learning-development provision may lie not simply in teaching a fixed set of study techniques but in creating opportunities for students to examine, evaluate, and adapt their own learning. This interpretation is consistent with broader perspectives that emphasise active learner engagement and the regulation of learning in response to different learning demands (Biggs & Tang, 2011; Zimmerman, 2002).

5.3. Learning Beyond the Classroom: Social, Digital, and Everyday Contexts

A third finding concerns the broadening of the contexts and resources that students recognised as relevant to learning. Students described learning not only through teachers and textbooks but also through peers, family members, colleagues, internet resources, social media, digital materials, professional experiences, and everyday situations. Student 95, for example, reported developing a clearer understanding of metacognition through discussion with a classmate who provided a simpler explanation. Student 107 described combining information from teachers and books with internet resources and then strengthening understanding by explaining the material to others. Student 77 reported beginning to engage with professional instructional videos on social media that had previously been overlooked.

These accounts indicate an expanded view of the learning environment in which multiple people, resources, technologies, and experiences can contribute to learning. This pattern is compatible with constructivist perspectives that emphasise learners' active engagement with knowledge and their learning environments (Biggs & Tang, 2011) and with Illeris's (2009) emphasis on the interactional and social dimensions of learning. Importantly, students did not describe digital resources simply as substitutes for teachers. Rather, they reported searching for additional explanations, comparing information, practising, and deciding which resources were useful for their particular learning needs. Digital and social resources therefore appeared within students' accounts as part of a broader orientation towards active and self-directed learning.

The findings also point towards a broader understanding of learning as extending beyond formal educational settings. Students reported applying learning principles in professional activities, language learning, sport, work, and other everyday situations. Such examples do not demonstrate objectively verified transfer or behavioural change, but they show that students themselves perceived learning as relevant across different contexts of their lives. This broader orientation is consistent with contemporary perspectives on lifelong learning and adaptability, which emphasise the capacity to continue learning across changing educational, professional, and social contexts (OECD, 2019; UNESCO, 2021).

5.4. Perceived Learning Gains and Personal Development

The fourth theme concerns the outcomes that students associated with their reported changes in learning practices. Students described better understanding, stronger retention, greater concentration, improved efficiency, increased confidence, greater persistence, reduced fear of mistakes, and enhanced practical competence. Student 115, for example, perceived that reorganising material around its structure and logical relationships reduced the time required to understand a topic from approximately five hours to two hours. Student 76 associated collaborative and creative learning activities with stronger long-term retention, while Student 114 perceived greater progress in English when newly learned vocabulary and grammar were actively used in spoken sentences rather than memorised in isolation. These accounts illustrate how students connected changes in their approaches to learning with perceived improvements in learning effectiveness.

The affective dimension of these accounts is also noteworthy. Students described becoming less afraid of mistakes, more willing to attempt difficult tasks, more confident in applying what

they had learned, and more persistent when initial efforts were unsuccessful. Student 87, for instance, described becoming increasingly willing to speak in front of others despite concerns about imperfect performance, while Student 116 described coming to regard mistakes as part of the process of improvement. These accounts suggest that students' perceived learning development encompassed cognitive, behavioural, and affective dimensions rather than academic study practices alone. This interpretation is also compatible with reflective perspectives in which learners revisit experiences, reconsider assumptions, and develop new understandings that may inform subsequent action (Boud et al., 1985; Moon, 1999; Schön, 1983).

These findings should, however, be interpreted within the boundaries of the study design. The reflections indicate that students perceived their changed approaches as beneficial, but they do not independently demonstrate improvements in academic achievement, learning efficiency, confidence, or behaviour. No pre–post measures, academic performance comparisons, or independent observations were used to verify these reported outcomes. The value of the reflective accounts therefore lies in revealing how students interpreted the changes they experienced and the significance they attributed to those changes rather than in establishing objective effects of the course.

5.5. Interpreting Reflective Accounts in an Assessed Course

An important qualification is that students wrote these reflections in response to prompts embedded in a course assessment. The prompts invited them to describe change, and the course itself introduced concepts such as metacognition and self-regulation. Consequently, the recurrence of these concepts in the portfolios may reflect students' adoption of course language, a desire to meet assessment expectations, genuine reinterpretation of their learning, or some combination of these processes. The analysis therefore illuminates the ways students *narrated* their learning development; it cannot independently establish the extent of change. Future research using independently collected reflections, accounts of limited or negative change, and follow-up observations could help examine these interpretations more critically.

5.6. Theoretical and Practical Implications

At an interpretive level, the findings bring together four dimensions of students' perceived learning development: reconceptualising learning as meaningful and applicable, developing greater learner agency and self-regulation, recognising a broader range of learning contexts and resources, and perceiving cognitive, behavioural, and affective development. Rather than representing a fixed or linear developmental sequence, these dimensions appeared to interact within students' accounts. For example, a broader conception of learning was often described alongside greater reflection on learning strategies, while increased learner agency was reflected in students' willingness to seek additional resources, apply knowledge in new contexts, and evaluate their own progress.

This interpretation brings together several strands of learning theory that are often discussed separately. Students' accounts reflected distinctions between reproductive and meaning-oriented learning (Marton & Säljö, 1976; Entwistle & Peterson, 2004), active and meaningful engagement with knowledge (Biggs & Tang, 2011), self-regulation and learner agency (Zimmerman, 2002), reflection on experience (Boud et al., 1985; Schön, 1983), and learning across changing contexts (OECD, 2019; UNESCO, 2021). The study's contribution is an integrated, context-sensitive account of how these dimensions were articulated together in students' post-course reflections, not a tested developmental model. The integrated thematic structure therefore offers an empirically grounded interpretive account of how students may understand changes in their relationship with learning.

Practically, the findings highlight the potential value of explicitly addressing learning

development within university curricula. Learning-development courses may provide opportunities for students not only to encounter learning strategies but also to examine their assumptions about learning, reflect on existing practices, experiment with alternative approaches, and consider how learning principles can be applied across disciplinary and everyday contexts. The students' accounts particularly point to the value of activities that encourage learners to explain concepts in their own words, connect knowledge with authentic situations, practise and revise, monitor their understanding, reflect on mistakes, seek information from multiple resources, and evaluate which strategies are appropriate for their own needs.

For Mongolian higher education, the study provides context-specific evidence from a compulsory university-wide learning-development course. Although the findings from one institution cannot be generalised to Mongolian higher education as a whole, they suggest that learning-to-learn provision warrants further attention as one means of supporting students' development as more reflective, autonomous, and adaptable learners. At the same time, the findings caution against presenting any single learning strategy as universally effective. Students' accounts instead emphasised the importance of selecting, evaluating, and adapting learning approaches according to individual needs, tasks, and contexts.

5.7. Limitations and Directions for Future Research

Several limitations should be considered when interpreting the findings. First, the study relied on students' written reflections. These accounts provide rich evidence of students' perceptions and interpretations but cannot establish objective improvement or causal effects. Second, the data were collected from a single university and a single Foundations of Learning course, which limits the transferability of the findings to other institutional, disciplinary, and cultural contexts.

Third, the reflective portfolios formed part of the regular course assessment and were produced within an instructor–student relationship. Although participation in the research was voluntary and students were informed that their decision would not affect their grades or academic standing, they may nevertheless have been inclined to emphasise positive learning experiences or course-related changes. The possibility of social desirability should therefore be considered when interpreting the predominantly positive accounts.

Fourth, the researchers were themselves instructors of the course. Their insider position provided detailed contextual knowledge but may also have shaped how students' accounts were interpreted. Reflexive discussion, consideration of alternative interpretations, and repeated engagement with the original narratives were used to make this influence visible within the analytical process rather than to claim that researcher subjectivity could be eliminated. Finally, the end-of-course, retrospective design offers neither a baseline account nor evidence of sustained change. The third prompt requested an example of change, which may have reduced the visibility of unchanged or negative experiences. The selection of complete portfolios may also have privileged students who were more engaged or more comfortable expressing themselves in writing; the characteristics of excluded portfolios were not reported.

Future research could examine the durability and transfer of these perceived changes through longitudinal designs following students across subsequent semesters or years. Mixed-methods research could combine reflective accounts with independent indicators such as measures of self-regulated learning, observed strategy use, academic engagement, or academic performance. Comparative studies across universities, disciplines, and cultural contexts could further examine how learning conceptions and learning-development experiences vary across educational settings. Future studies could also collect reflective data independently of course assessment, or after grades have been finalised, to reduce the potential influence of assessment expectations and instructor–student

relationships on students' accounts.

6. Conclusion

This study examined how university students conceptualised learning and how they perceived changes in their approaches to learning after completing a Foundations of Learning course at the International University of Ulaanbaatar. Analysis of 154 reflective portfolios identified four interconnected dimensions: learning as meaning-making, application, and transformation; becoming self-directed and reflective learners; learning as social, resource-connected, and lifelong practice; and perceived gains in learning and personal development.

The findings suggest that students perceived changes extending beyond the adoption of particular study techniques to a broader reconsideration of their relationship with learning. Their accounts reflected a movement from memorisation and reproduction towards understanding and application, greater awareness and regulation of their own learning, and recognition of learning opportunities across social, digital, professional, and everyday contexts. Reflection was also prominent in students' accounts, particularly in descriptions of examining previous habits, evaluating learning approaches, learning from mistakes, and making deliberate adjustments. Students associated these perceived changes with gains in understanding, retention, confidence, persistence, practical competence, and personal development. However, these outcomes remain self-reported and should not be interpreted as evidence of objectively verified improvement or causal effects of the course.

Overall, the study highlights the potential value of explicitly addressing learning development within higher education. In the Mongolian university context examined here, students' reflections suggest that a Foundations of Learning course may provide opportunities for students to reconsider assumptions about learning and develop more reflective, self-directed, and adaptable approaches to learning. Rather than proposing a fixed model of learning development, the study provides a context-specific account of how students understand and experience perceived changes in themselves as learners. Further longitudinal, mixed-methods, and multi-institutional research is needed to examine whether these perceived changes are sustained over time and how they relate to independently measured learning outcomes.

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