

# Designing and delivering Embedded Immersive Learning Practices within the VU Block delivery model

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## Abstract

Experiential Based Learning in the context of Outdoor Adventure Education is delivered in complex learning environments where teachers deliver programming in isolation (Fang et al., 2023). Due to the complexity of working in natural environments, often in remote and wilderness settings, and teachers working in isolation inconsistencies between deliveries of the same subject or programming often occurs (Picknoll et al., 2023). This article will provide a reflective case study to examine and demonstrate how embedding immersive learning teaching and learning practices can be effectively included to achieve greater consistency between Experiential Based Learning programmes to meet the Intentioned Learning Outcome (ILOs) (Biggs, 2014). In addition, this delivery structure has been applied to the intensive delivery framework of Victoria Universities Block Model, which occurs over a four-week delivery period.

Immersive Learning Practices (ILPs) are experiences that can be facilitated in situ, or replicate authentic and real conditions as described in Boud (2022). However, these practices and how they relate to programmed delivery need to be explicitly communicated to teaching staff prior to program delivery. Program ILP also need to be evaluated and assessed by teaching staff in the field to consider possible adjustments to their application for future programming.

This case study will be referring to two units/subject delivered at Victoria University within the First Year College and are part of the School of Outdoor Leadership and Outdoor Environmental Science. Both SOL units contain HE and VE outcomes that provide knowledge and skills required in subsequent units/subjects contained in these degrees as well as in relevant industry workplaces. The application of a pre-delivery information for staff about contained in the unit online learning management system and pre-program briefings have been used to communicate how EILP can be applied to field teaching and programming. These measures have supported some improvements in providing consistency between EBL programs facilitated by independent teaching staff as part of an intensive learning framework in a remote and wilderness settings.

**Keywords:** Block model, embedded immersive learning, experiential based learning

## Introduction

This article reflective case study will examine how ILPs have been programmed within the VU Block Model, a four week intensive learning framework, to produce greater consistency between Outdoor Adventure programs facilitated by independent teaching staff in complex teaching and learning environments (Snowden, 2011). The variability in field programming in this context is due to a variety of factors that often include dynamic natural and social environments facilitated over multiple days and nights (Picknoll et al., 2023). Group dynamics, weather, terrain, and trip preparation by individuals all play some role in contributing to the complex nature of these teaching and learning environments.

The intensive learning framework referred to in this case study is the VU Block design and delivery principles and EBL provide important frameworks that guide and inform experiential (Kolb, 1984), and “authentic” learning (Boud, 2022). However, the degree to which “applied”, (Spence & McDonald, 2015) or “experiential based” (Kolb, 1984) learning environments become “engaging”, “active” (Brame, 2016), or “enduring” (Hansen, 2011, p. 30; Wiggins & McTighe, 2005, p. 17), is strongly influenced by how they are facilitated or structured, according to Motley et al. (2024).

Teaching staff facilitating EBL programming as part of the Bachelors of Outdoor Leadership and Outdoor Environmental Science have all independently demonstrated successful facilitation units/subject containing EBL programming. Student feedback on VU Student Experience of Teaching survey results (SET). All staff received high to very high satisfaction scores relating to the six survey questions assessing the quality of teaching during a unit delivery.

However, it became evident that there were significant inconsistencies in how ILOs were being addressed between units/subjects with multiple deliveries in these complex learning and teaching environments. The manifestation of these survey results between different deliveries of a unit. Though most results reflected high satisfaction rates, results demonstrated inconsistencies with what parts of the unit delivery they were satisfied. Student cohorts from different deliveries of the same unit also presented with significant variation in their recollection of skills and knowledge covered during their respective learning experiences with a particular unit. These inconsistencies presented challenges when considering the scaffolding of course skills and knowledge and how unit ILO’s fit within both the Higher Education and Vocational Education contexts.

To address these inconsistencies, it was felt that the EBL programming run as part of the two units targeted in this case study needed additional programming information to better guide teaching and learning strategies to improve consistencies in meeting ILOs between deliveries.

EBL Sessions have been supported with Embedded Immersive Learning Practices (ILP) (Motley et al., 2024), to assist learners with meeting Intended Learning Outcomes (ILO’s) (Biggs, 2014), in intensive teaching and learning frameworks that may include VU Block Model (McCluskey et al., 2019), and Work Integrated Learning (WIL) (Dean et al., 2019). EILP in these applied context help guide facilitation of ILO’s in “real world” authentic learning contexts (Herrington et al., 2014, p. 23-24). They can also be programmed to help promote enduring understanding (Hansen, 2011;Wiggins & McTighe, 2005), and support Active

Learning (Brame, 2016). Due to EILP supporting many applied learning contexts, they may also be helpful with addressing graduate capabilities (Kaider, 2017, p.153).

## **VU Block Model Framework**

The Block Mode developed at Victoria University (VU) Australia, for its undergraduate cohort (Samarawickrema et al., 2022), was a bold response to support all student learning and engagement. In VU Block model, students' study one unit/subject at a time over four weeks. This format has produced successful reforms to student retention rates, accessibility, and student engagement in HE (Samarawickrema, 2021; Smallridge, 2019). The VU Block Model also creates opportunities to deliver modularised programming of units/subjects in intensive, accelerated, modes (Samarawickrema, 2021). French (2016) has expressed that modularisation accommodates flexible study periods greater mobility for students, and increased opportunity for interdisciplinary learning.

The VU Block Model accommodates Embedded Immersive Practices and Experiential Based for the following:

- Students enrol in a single unit at a time. There should be no competing classes or assignments.
- Embedded EBL and Immersive sessions can occupy up to four weeks withing the VU Block Model delivery period.
- Smaller class sizes also increase the capacity to function in more authentic embedded sessions.

VU Block Model design and delivery principles, McCluskey et al. (2019, p.10), outline “learner centred” approaches that are meant to be supportive, while promoting, engaging, authentic, and active learning environments. An additional significant factor in establishing successful intensive learning environments according to, (Kift et al., 2010, p. 4; McCluskey et al., 2019, p. 8), is creating a sense of belonging through peer to peer and learner to facilitator interactions. The attributes of Experiential Based Learning (EBL) as outlined in Andresen et al. (2000, p. 1-4), can be seen to aligned with VU Block Model design and delivery principles and described in McCluskey et al. (2019); Samarawickrema (2022).

VU Block Model and EBL frameworks identify the importance of “authentic” TLA’s and ATs, (Bowen, 1981; Bowers, 2017; Newmann and Wehlage, 1993), clear Intended Learning Outcome (ILO’s) (Crespo et al., 2010), scaffolded TLAs (Wilson, 2014), that include feedback and feedforward information to learners (Samarawickrema et al., 2022). These framework attributes are believed to provide relevant contexts for High Impact Practices (HIPs) (Archer-Kuhn and Mackinnon, 2020; Russell et al., 2023; Sengupta, 2023) that are believed to assist learners with the appropriation of meaning from those TLA’s and AT experiences.

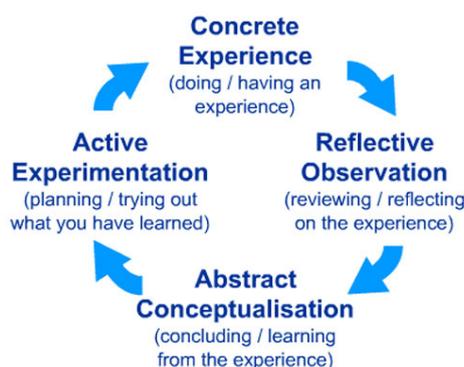
## **Literature Review**

### **Experiential Learning Frameworks**

Experiential Based Learning (EBL) sessions provide opportunities for learners engaging to with and derive meaning from direct experience (Andresen et al., 2000, p. 207). “Experiential learning practices and outcomes are interactive and involve connections between the person, learning environment, and wider culture”, (Lewin, 1936, p. 66). EBL as described in Kolb

(1984), involves a four part learning cycle (Fig. 1), that aims to link the process of applying and refining skills and knowledge to an experiential context. The potential to receive either direct empirical feedback or facilitated feedback can occur at any stage of this process (Kolb, 1984).

**Figure 1. Kolb's Learning Cycle (Wu et al., 2016)**



These learning experience are aimed at trying to create holistic learning environments that include a level of “cognitive dissonance” (Harmon-Jones et al., 2015), or complexity, Snowden (2011), that illicit a response from learners requiring some active application of their skills and knowledge (Kong, 2021). Learner development occurs during active engagement with solving problems that are part of the EBL session. These sessions contain support Social Constructivist theories by providing opportunities for learners to analyse, share discuss, and reflect on their engagement with the experience (Kolb, 2017).

“Experiential learning environments are participative, learner-centred experiences, that rely on the construction of meaning by learners (Andresen et al., 2000). These experiences may be formal facilitated experiences, informal experiences, as well as Work Integrated Learning (WIL) (Dean et al., 2019). Andresen et al. (2000), suggest the experiential learning contains the following qualities.

- Experience offers the stimulus for learning.
- Experiential learning environments usually accommodate holistic learning processes.
- Experiential learning environments often support Constructivist and Social Constructivist learning theories.

Though EBL has been shown to have a positive effect of student engagement, some questions remain of how effect an EBL context is within a learner cohort (Baartman & Ruijs, 2011); Motley et al., 2024). Different learner perceptions of an EBL are dependent on relationships between environment, perceptions, conceptions and ILOs (Haggis, 2003). This implies that there are usually a range of subjective responses to an EBL context. As mentioned in, Motley et al. (2024), facilitation strategies employing immersive pedagogies may assist with greater consistency in student engagement and attainment of ILOs.

### **Student Engagement**

EBL contexts do provide opportunities to instigate active learning (Brame, 2016); Xerri et al., 2018). According to Kong (2021), there is a direct correlation between motivating learners and engaging them in an educational context. Effective experiential learning may assist with creating a positive feedback loop driving learner engagement and motivation. Teaching and Learning activities (TLAs) and Assessment Tasks (ATs) that encourage learner engagement need to include purposeful tasks, inclusive social environments, provide a degree of flexibility and are appropriately scaffolded (Russell et al., 2023). These experiences also benefit from predictable multiple feedback points within an a task to help inform learners of their progress while providing cues to refinements to their skills and knowledge (Sengupta, 2023). TLA's and AT's promote learner engagement when they include opportunities to apply and reflect on "horizontal development, what we know, and vertical development, how we know" (Spence & McDonald, 2015).

### **Immersive Pedagogies**

VU Block design and delivery principles and EBL provide important frameworks that guide and inform experiential (Kolb, 1984) and "authentic" (Boud, 2022) learning. However, the degree to which applied (Spence & McDonald, 2015) or experiential based (Kolb, 1984) learning environments become engaging, active (Brame, 2016), or enduring (Hansen, 2011, p. 30; Wiggins & McTighe, 2005, p. 17), is strongly influenced by how they are facilitated or structured. According to Motley et al. (2024, p. 1), "Immersive learning is not fully captured by existing pedagogical models such as experiential education or in the current list of high-impact practices, or in literature on applied learning".

Though there is agreement that EBL, IL and WIL do provide valuable, authentic, and learner centred educational experiences (Kolb, 1984); Lave & Wenger, 1991; Smith et al., 2007). However, questions remain of how EBL programs ensure consistent quality programming. Explicit facilitation practices may need to be incorporated into applied learning frameworks like EBL and WIL to ensure Intended Learning Outcomes (ILOs) are being achieved. Experiential learning environments can be viewed very differently buy teachers and learners, (Matsuo, 2015). This article suggests that he application of additional Immersive Learning Practices (ILPs) to VU Block Model and other intensive frameworks may assist with attaining ILOs and Graduate Capabilities in teaching and learning environments, and improve consistency between EBL, IL, and WIL program deliveries (Motley et al., 2024).

"Immersive practices provide facilitation strategies that guide learner engagement within an experiential-learning context", (Harvey et al., 2016). Application of these strategies help guide facilitation directed at attaining an equilibrium between a learner's reflective capacity and the demands or opportunities (Partridge, 2003) that exist as part of a learning environment.

There were several practices identified during the literature review associated with immersive learning and facilitation aimed at promoting active learning and student engagement. However, the immersive practices most referred to in the literature relevant to this case study were, Reflection, Agency, Challenge, Authentic, Focus, and Teacher as facilitator.

## **EILP Reflective Case Study**

### **EBL Context**

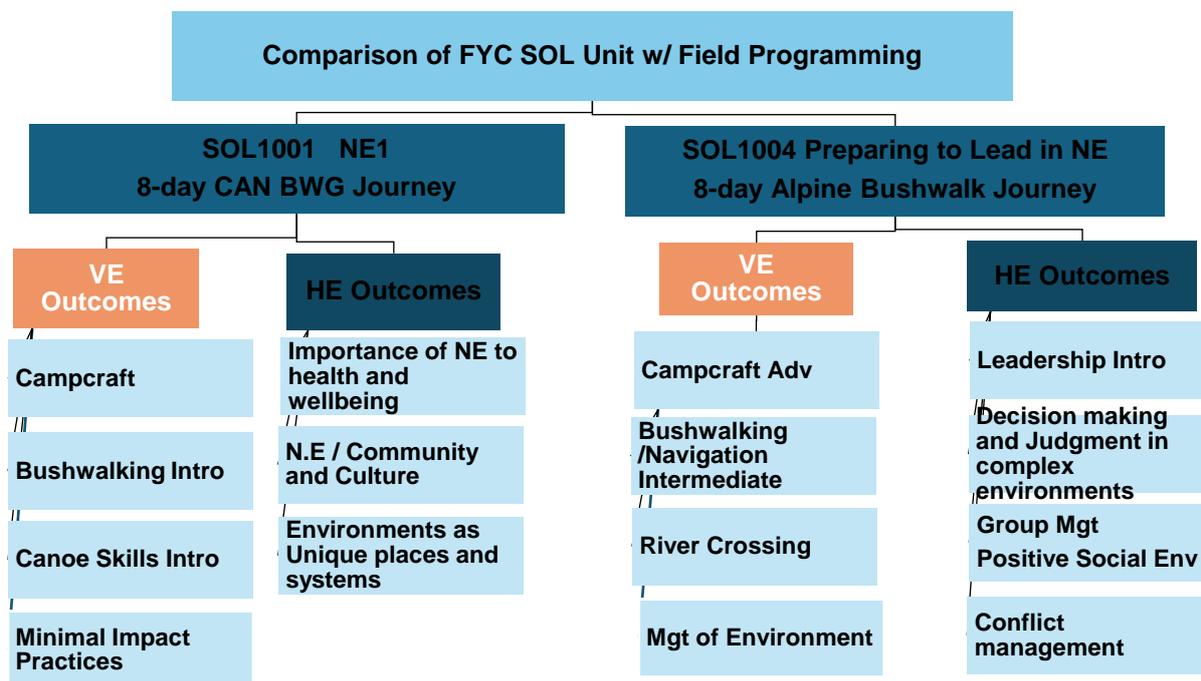
This reflective case study focuses on EBL contexts supported by EILPs that have been designed into two different units/subjects contained within the degrees of the Bachelors Outdoor Leadership and Outdoor (SBOL) and Outdoor Environmental Science (SBOE) delivered within the First Year College at Victoria University. The units/subjects addressed in the case study include Natural Environments 1 (SOL1001 NE1) and Preparing to Lead Others in Natural Environments (SOL1004 PLO). Both units contain EBL programming that takes place in complex learning environments, have multiple deliveries often taught by different staff, and contain Higher Educational (HE) and Vocational Educational (VE) ILOs that fit within scaffolded programming within the SBOL and SBOE degrees. Figure 2 provides a summary of content covered in both units/subjects. These are complex teaching and learning environments facilitated in in remote natural settings with groups of people undertaking adventure activities.

Both SOL1001NE1 and SOL1004 PLO units/subjects are delivered within the VU Block Model and contain an 8-day 7 night outdoor adventure EBL programs in remote natural environments. These units both contain HE and VE ILOs that are delivered in a “high challenge”, “high support” environments that aim to provide scaffolded skills and knowledge, (Wilson, 2014), to be employed further developed in later EBL contexts contained within subsequent units part of both the SBOL and SBOE degree areas.. Both SOL1001 NE 1 and SOL1004 PLO in NE deliver authentic (Boud, 2022), applied experiential learning informed by current outdoor adventure education and related industry workplace skills and knowledge (Kaider, 2017).

The SOL1001 NE1 is scheduled early in the academic year of the first year of the SBOL and SBOE Bachelor degrees, usually occurring semester 1 in either Block 1 or 2. The unit/subject’s EBL context is structured as a journey based adventure program that contains canoeing and bushwalking. The journey takes place in an ecologically and culturally significant area that accommodates programming that serves as an introduction to natural environments and introductory outdoor adventure skills associated with bushwalking, canoeing and campcraft. The unit provides the first extended outdoor adventure program contained within the SBOL and SBOE degrees.

SOL1004 POL is a unit subject is scheduled later during the first year of the SBOL and SBOE degrees, usually running semester 2 in either Block 3 or 4. The unit/subject’s EBL context is structured as a journey based bushwalking adventure program. This journey also takes place in a significant ecological landscape. This alpine bushwalk offers greater challenges due to the terrain and environmental conditions. This unit develops and furthers skills introduced in SOL1001 NE1 while introducing new HE and VE skills and knowledge required in subsequent units within the SBOL and SBOE degrees. Figure 2 provides a breakdown of the HE and VE ILOs related to each unit/subject

Figure 2. SOL1001 and SOL1004 EBL programs



Due to variations in staff facilitation styles, group dynamics and the complexity of natural environmental, conditions, it had become apparent that there were significant inconsistencies between learner experiences and understanding of unit/subject ILOs. The range of learner program experiences were reflected in the significant variation in skills and knowledge communicated by learners returning from field programming from the different deliveries of these units by different staff. Though the Student Evaluation of Teaching (SET) results consistently expressed high to very high satisfaction for all teachers across all unit/subject deliveries, the inconsistencies in student experiences were felt to have a direct impact on the ILOs skills and knowledge that could be recounted or applied in subsequent scaffolded units in the SBOL and SBOE delivery patterns of study. These variations appeared to be significant between learner cohorts from different deliveries of SOL1001 NE1 and SOL1004 PLO.

In an attempt to gain greater understanding of the differences between the deliveries of these field-based EBL field programs for both the SOL1001 NE1 and SOL1004 PLO units were evaluated. Initially staff were interviewed on their interpretations of the field programs based on their direct experiences and understanding of the ILOs. Each staff member was consulted on where the physical and mental challenges occurred along these respective routes, when skills and knowledge had been presented, if/when learners were given opportunities to consolidate their skills and knowledge, and if/when they believed reflection on learning to occur. Staff facilitation approaches also varied regarding student agency. Some staff took far more control of teaching skills and knowledge related to both HE and VE outcomes, while others afforded greater opportunities for students to take greater control of their learning experiences. All staff had a consistent and clear understanding of their responsibilities in these remote and wilderness settings.

As one might predict, the staff responses varied significantly. Staff perceptions varied widely. Though staff felt they were addressing the ILOs of these units, their priorities of how ILOs were to be delivered differed significantly. Some staff put greater emphasis on HE ILOs where other assigned greater amounts of time and effort to facilitating VE ILOs. There were large variations in how HE and VE ILOs were prioritised by staff. These variations likely account for the lack of consistency in being able to demonstrate or recounted ILOs between student cohorts from the different deliveries of SOL1001 NE1 and SOL1004 PLO field programs.

It had become apparent that the variations in between program deliveries were due to a wide range of staff interpretations to the unit/subject content and how the associated ILOs were to be met during the SOL1001 NE1 and SOL1004 PLO EBL field programming. Staff were employing immersive facilitation strategies to the EBL programming. However, these strategies were inconsistent in how they prioritised student learning and the role of the teacher.

## Methods

Qualitative responses were initially gathered via staff interviews on how they prioritised the individual HE and VE ILOs. Though all staff saw the ILO's as relevant to both the SOL1001 and SOL1004 field programming they did priorities them differently. These differences did appear to be significant. There were variations between staff in how the prioritised the HE and VE outcomes. In addition, ILOs within the broad areas of HE and VE ILOs were also prioritised differently.

During this initial interview staff were asked about their preferred facilitation styles, and how they understood student learning occurred while on the SOL1001 NE1 and SOL1004 PLO field programs. Most staff felt that students learned best from hands on and/or direct experiences (Kaider, 2017). Most agreed that students needed opportunities to be introduced to new skills and knowledge and have time to consolidate and refine skills and knowledge. However, there were large discrepancies in how these “hands on” direct experiences were facilitated. Other significant areas of differences included how staff viewed their role as a facilitator due to their perceptions of the level of challenge of the SOL1001 NE1 and SOL1004 PLO programs.

A literature review was conducted to gather more information on immersive learning practices in experiential and intensive learning contexts. The review produced a range of effective Immersive Learning Practices (ILP) that were believed to assist with promoting student engagement by supporting High Impact TLA's and ATs in EBL a and intensive contexts, (Anderson, 2016; Archer-Kuhn & Mackinnon, 2020; Archer-Kuhn et al., 2021; Motley et al., 2024; Rosier et al., 2016). Based on the literature review a list of ILPs was compiled. Staff were invited to select and rank and their preferred IPLs. Based on the staff responses and further discussions six ILPs were believed to be most aligned with the SOL1001 NE1 and SOL1004 PLO programs. The six ILPs were applied to both units to inform EBL program design and facilitation.

The selected ILPs that have been applied to the SOL1001 and SOL1004 EBL field programming include:

**Critical reflection** – the careful examination of the theoretical, ethical, social, and political consequences of an experience, action, expectation, or practice (Carless & Boud, 2018).

**Autonomy/Agency** – the degree to which learners have control over their own goals, behaviours, and outcomes within a learning experience (Payne & Wattoo, 2008). Agency - the intentional interaction with and within their environment (Archer-Kuhn et al., 2021).

**Challenge** – Damianakis et al. (2019), found that many students suggested the process of transformation was uncomfortable. Challenging experiences often result in a greater understanding of themselves in relation to others and the world and a shift in their own beliefs, behaviours, and understanding (Hoggan, 2016).

**Authentic Place-Based** – learning activities - relevant and complex since. They may occur over a sustained period of time where learner engage with and within highly contextualized environments (Boud, 2022).

**Time to Focus** – A critical component that relates time to learning may be learner focus and cognitive engagement Motley et al. (2024) Focus can assist with learning, skills practice, and content mastery (AERO, 2022).

**Facilitator Teacher** – Immersive TLA's are rely on carefully planned facilitation. High Support /High Challenge Learning environments (Mariani, 1997; Wilson, 2014).

Through additional consultation it was decided that not all EBL field programs require the same allocation of time, effort, and design considerations. Though the listed ILPs may be relevant to most of the SBOL and SBOE EBL field programs they are not to be generalised or facilitated equally across all unit/subject deliveries. Differences in expected levels of understanding related to the application of skills and knowledge, predicted levels of understanding related to reflective practice, degrees of appropriate physical and mental challenge aligned with a unit/subject, and the amount of facilitation needed to support students all influence how ILPs are related to EBL programming.

Each of the selected ILP's were evaluated for their role and relevance to the SOL1001 NE1 and SOL1004 PLO EBL programs. Consideration of where and when student could be given greater agency, where and when reflective practice may occur, allocation of time for students to apply and refine skills and knowledge, and when greater facilitation might be required. The EBL field programs were also evaluated for their respective degrees of challenge and where and when the levels of challenge were likely to be greatest during these EBL journeys.

The ILP's were applied to the SOL1001 NE1 and SOL1004 PLO EBL programs more accurately target how different unit/subject ILO's and Graduate Capabilities (Grad Caps) associated with each unit were going to be met while accounting for expected student experience levels at these two different points within the SBOL and SBOE degrees. The routes that these respective journeys were likely to follow were also evaluated for where time could be allocated for students to practice and refine skills and knowledge. Other sections of these journeys presented likely facilitation points. These facilitation locations might be considered as teaching locations, whereas facilitation and support to individual students may occur at any time as direct facilitation, indirect facilitation, or no facilitation. The application of the ILOs to the SOL1001 NE1 and SOL1004 PLO EBL programs were related and mapped directly to the field program documents and also related to the EBL field program routes for both units. Though the complex nature of adventure programming may mean that plans may change, (Picknoll et al., 2023), multiple opportunities to address ILOs and apply ILPs were identified

in the each of the field programs and along each of the respective routes used in the EBL field experiences for both units.

In response to the variations in field facilitation, staff delivering these units were provided with greater information identifying the Immersive Learning Practices (ILPs) that were selected to support the EBL programming for both units/subjects and how they might be applied to the SOL1001 NE1 an SOL1004 PLO. Staff were provided with this information in the Staff Resources section of the Online Learning Platform for both units. Staff were directed to the program teaching and facilitation strategy resources prior to their delivery of the field programming. This information provided detailed explanations of how the selected ILPs were applied to the field programs for both SOL1001 NE1 and SOL1004 PLO. The application of the ILPs were prioritised to support learners in each unit/subject context while also clarifying possible facilitation strategies along the respective EBL program routes.

Pre field program briefings also included greater guidelines included that provided information of where indirect, and low to no facilitation strategies could be used to create a range of identifiable learning environments.

During the 2023-2024 SOL1001 NE1 and SOL1004 PLO field class delivery periods all staff did receive a program brief prior to the delivery of each program. Briefing did include a program outline identifying HE and VE ILO's, academic resources, emergency response procedures, and logistics. Staff were asked to complete a short survey covering basic post trip feedback. This did include questions aimed at measuring facilitation styles and techniques.

2023-2024, staff delivering the SOL1001 NE1 and SOL1004 PLO receive a pre-program briefing covering a program outline identifying HE and VE ILO's, academic resources, emergency response procedures, and logistics. However, staff delivering the 2023-2024 SOL1001 and SOL1004 EBL programming received additional information identifying the selected ILPs have been applied to the respective program deliveries with some additional information on where these practices might be applied during the program. In addition, these staff were informed of how the ILPs were attenuated to support EILS's and EBL programming located in the Online Learning Management System in the Staff Resource section.

Staff we asked to complete a short post EBL field program questionnaire. The questions seek staff impressions on the following topics.

**Student** – agency Q3, reflective practice Q3 Q9, peer teaching and learning, Q5 and perceived challenge Q1, Q2

**Staff** – Facilitation considerations Q4 Q5 Q7 Q8

Post Program Staff Questionnaire

- Q1 How challenging was the program content for the learners?
- Q2 How challenging were the environmental conditions for learners?
- Q3 There were opportunities for learner to practice and consolidate skills and knowledge?
- Q4 I felt free to employ my own facilitating style

- Q5 Were there opportunities that supported peer teaching and feedback?
- Q6 Rank the amount of formally facilitated session run during the program.
- Q7 Rank the amount of indirect facilitation.
- Q8 Rank the amount of no facilitation where you observed learner engaged with any relevant program content.
- Q9 Rank the amount of time allocated to learner for reflect and self-evaluate on their personal progress or performance.

A ranking 1–5 Likert Scale was used as the responses measure for all 9 questions. There was also opportunity for staff to add any additional comments at the end of the questionnaire.

Likert Score Descriptors for the post program questionnaire

1 – No occurrence, 2 – Low occurrence, 3 – Medium occurrence, 4 – High occurrence, 5 – Very High occurrence.

A short post EBL field program interview for each delivery provided additional qualitative information was gathered from staff regarding the delivery of ILOs, student performance and engagement, and facilitation techniques used during the EBL field programs. Of particular interest were perceived student responses to ILPs Critical Reflection, Autonomy/Agency, and Time to Focus.

## Results

Staff did access the online pre trip subject resources for both units prior to all deliveries of the field programs. Access to the content could be assessed in the Online Learning Platform. Observations during the Pre-Program Briefings indicated that staff had a more refined understanding of the SOL1001 NE1 and SOL1004 PLO EBL ILOs and how they were likely to be achieved. Staff also expressed greater consistency in how ILOs were prioritised for each unit/subject.

After each delivery of SOL1001 NE1 and SOL1004 PLO staff were asked to complete the Post Program Staff Questionnaire. Likert score responses from the questionnaires for SOL1001 NE1 and SOL1004 PLO were collected and assessed for the degree of consistency.

The staff responses to the post trip questionnaire produce a very small data set, and therefore the reliability of the ANOVA statistical analysis is limited. SOL1001 2023 – 2024 Overall post treatment questionnaire responses yielded 8 responses collated to create this data set. 8 of the 10 program staff responded yielding a response rate of 80%. The SOL1004 2023 – 2024 post treatment questionnaire responses yielded 6 staff questionnaire responses yielding a response rate of 75%.

We will continue to collect questionnaire responses for these two units/subjects into the future to monitor staff perceptions of these field programs. Ultimately, we may build a data set that provides a large enough of a sample size to produce reliable confidence levels.

One-Way ANOVA test was performed on the following collated data sets;

- Student focused questions Likert responses for SOL1001 and SOL1004 deliveries running 2023 – 2024
- Staff focused questions Likert responses for SOL1001 and SOL1004 deliveries running 2023 – 2024

### Student Focused Questionnaire Responses

The student focused questions mainly target measures of student involvement with the respective EBL field programming. These results have been generated from Likert staff responses to the Post Program Questionnaire. The results listed below are based on collated responses from Q1, Q2, Q3, Q5 and Q9 from

As can be observed in Tables 1 and 2 post treatment staff questionnaire Likert responses for the student focused questions show a possible correlation of observed student considerations between the SOL1001 NE1 2023 – 2024 deliveries and observed student considerations between thSOL1004 PLO 2023 – 2024 deliveries, and a strong correlation for the SOL1004 PLO 2023 – 2024.

- Q1 How challenging was the program content for the learners?
- Q2 How challenging were the environmental conditions for learners?
- Q3 There were opportunities for learner to practice and consolidate skills and knowledge?
- Q5 Were there opportunities that supported peer teaching and feedback?
- Q9 Rank the amount of time allocated to learner for reflect and self-evaluate on their personal progress or performance.

**Table 1. SOL1001 Student Focused question responses Post Treatment**

SOL 1001 2023 – 2024 Student Focused Questions SOL1001 Q1, Q2, Q3, Q5, Q9

Source	DF	Sum of Square	Mean Square	F Statistic	P-value
Groups (between groups)	7	1.175	0.1679	0.3443	0.9271
Error (within groups)	32	15.6	0.4875		
<b>Total</b>	39	16.775	0.4301		

**Table 2. SOL1004 Student Focused question responses Post Treatment**

SOL 1004 2023 – 2024 Student Focused Questions SOL1001 Q1, Q2, Q3, Q5, Q9

Source	DF	Sum of Square	Mean Square	F Statistic	P-value
Groups (between groups)	5	0.4	0.08	0.2824	0.9182
Error (within groups)	24	6.8	0.2833		
<b>Total</b>	29	7.2	0.2483		

### Staff Focused Questionnaire Responses

The staff focused questions target subjective measures of perceived of facilitation strategies employed during the EBL field programming for both units. These results have been generated from Likert staff responses to the Post Program Questionnaire. The results listed below are based on collated responses from Q4, Q6, Q7, Q8 and Q9.

As can be observed in Tables 3 and 4 post treatment staff questionnaire Likert responses for the staff focused questions show a possible correlation of perceived facilitation strategies between the SOL1001 NE1 2023–2024 deliveries, and perceived facilitation strategies between thSOL1004 PLO 2023–2024 deliveries, and a strong correlation for the SOL1004 PLO 2023 – 2024.

- Q4 I felt free to employ my own facilitating style
- Q6 Rank the amount of formally facilitated session run during the program.
- Q7 Rank the amount of indirect facilitation.
- Q8 Rank the amount of no facilitation where you observed learner engaged with any relevant program content.

**Table 3. SOL1001 Staff Focused question responses Post Treatment**

SOL 1001 2023–2024 Staff Focused responses Q4, Q6, Q7, Q8

Source	DF	Sum of Square	Mean Square	F Statistic	P-value
Groups (between groups)	7	0.7188	0.1027	0.3943	0.8964
Error (within groups)	24	6.25	0.2604		
<b>Total</b>	31	6.9688	0.2248		

**Table 4. SOL1004 Staff Focused question responses Post Treatment**

SOL 1004 2023–2024 Staff Focused responses Q4, Q6, Q7, Q8

Source	DF	Sum of Square	Mean Square	F Statistic	P-value
Groups (between groups)	5	0.8333	0.1667	0.3333	0.8861
Error (within groups)	18	9	0.5		
<b>Total</b>	23	9.8333	0.4275		

Reports from staff delivering latter units dependent on the scaffolded experiences contained within the SOL100 NE1 and SOL1004 PLO EBL programs expressed that there appeared to be greater and more consistent demonstration of requisite skills and knowledge by students.

## Discussion

The aim of this project was to improve consistency between EBL program deliveries for two units/subject, SOL1001 Natural Environments 1 and SOL1004 Preparing to Lead Others in Natural Environments. Greater consistency between deliveries was needed to ensure that scaffolding of skills and knowledge was accurate and effective, and that programming met all ILO's and supported the associated assessment tasks.

Though the ILO's for these units/subjects have always been made explicit to learners and staff, the variability in how they were prioritised, facilitated and practiced between program deliveries made inbuilt and contingent scaffolding (Wilson, 2014), unpredictable and inconsistent between learner cohorts. These inconsistencies were ascribed to variations in staff interpretations of the EBL field programming scheduled as part of both the SOL1001 NE1 and SOL1004 PLO units/subjects. Variations in delivery were also attributed to staff prioritising the ILOs associated with both units differently.

Providing staff with more explicit unit delivery information addressing the unit/subject ILOs, EBL field programming information that including mapped ILPs and guidance on the relative application of the ILPs to each EBL field program appears to have assisted staff with gaining a deeper understanding of the delivery expectations associated with these two units/subjects. Staff were more able to communicate what the ILOs for each unit/subject are during pre-EBL program discussions, while also being able to refer to the specific ILPs and how they might be applied to the unit/s that they were teaching/facilitating.

Post Treatment analysis of the student focused questionnaire Likert responses for the SOL1001 NE1 and SOL1004 PLO deliveries demonstrate a possible correlation in consistency between staff responses. In addition, post treatment analysis of the staff focused questionnaire Likert responses for the SOL1001 NE1 and SOL1004 PLO deliveries also demonstrate a possible correlation in consistency between staff responses. However, as mentioned early these statistical results are at this point inconclusive do to the small data sets.

The short post EBL field program interview for each delivery has provided additional qualitative information gathered from staff regarding the delivery of ILOs, student performance and engagement, and facilitation techniques used during the EBL field programs. During these post EBL program interviews, staff used more consistent language to describe how the programs were facilitated. Importantly, all staff used the same terminology when communicating the ILPs that were employed during their delivery/s of these units/subject EBL field programs. Even where the differences do occur it appears to be more possible to more clearly and precisely communicate differences between deliveries.

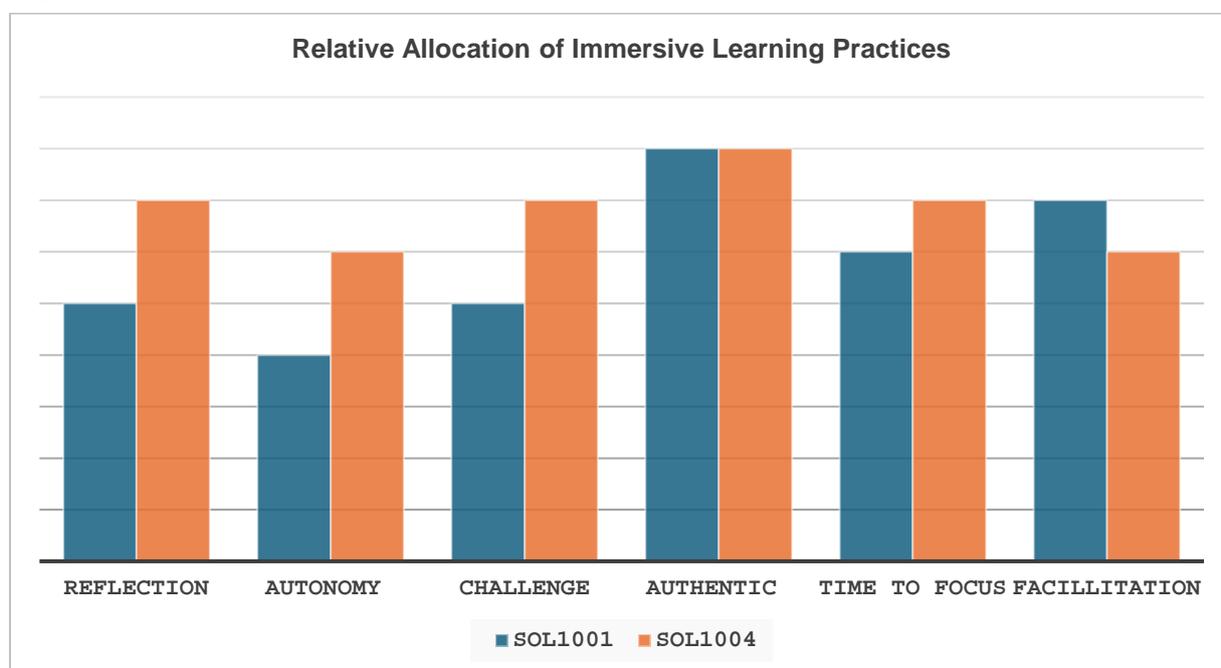
Figure 3 provides a depiction of the relative application of ILPs as they relate to SOL1001 NE1 and SOL1004 PLO EBL field programs. These units/subject have different ILOs and Graduate Capabilities. Learners entering these units are presumably at different stages of understanding skills and knowledge related to course content. SOL1001 NE1 provides one of the very first EBL experiences in the SBOL and SBOE degrees. It is a unit that provides underpinning skills and knowledge needed and scaffolded into SOL1004. As can be seen in Figure 3, the use of Facilitation in the SOL1001 EBL experiences ranks higher than SOL1004 EBL program deliveries. Because learners will have experienced other scaffolded EBL experiences that

support the delivery of SOL 1004, there is a greater focus on ILPs Autonomy, Reflection, and Challenge.

Understanding which ILPs will be employed is an important step in providing meaningful EBL programming. Determining how much or often ILPs are applied and embedded in a unit/subject may help achieve greater consistency between multiple facilitated EBL deliveries of a unit/subject (Motley et al., 2024). Both SOL1001 and SOL1004 use EBL programming to meet.

Higher resolution understanding and application of ILPs and EILS can help staff align EBL programming with inbuilt scaffolded (Wilson, 2014), High Impact (Russell et al., 2023), facilitation and programming practices that also support Transparent Design as described in Winkelmes (2019).

**Figure 3. Relative allocation of ILP to SOL1001 and SOL1004 EBL programming**



These units/subject take place in challenging, and complex natural environments. These adventure activity EBL programs also present complex social environments. ILP used to facilitate ILS that support EBL programming appears to support staff making decisions of how to best meet program ILOs, Grad Caps, maintain a positive social environment, while establishing more consistent student centred (Bowen, 2017), EBL sessions that better support unit assessments, and course scaffolding.

## References

- AERO. (2022). *Planning and sequencing units to progress student learning*. Australian Government. <https://www.edresearch.edu.au/summaries-explainers/explainers/mastery-learning>
- Anderson, I. (2016). Indigenous Australians and Higher Education: The Contemporary Policy Agenda. In A. Harvey, C. Burnheim, & M. Brett (Eds.), *Student Equity in Australian Higher Education: Twenty-five years of A Fair Chance for All* (pp. 221-239). Springer Singapore. [https://doi.org/10.1007/978-981-10-0315-8\\_13](https://doi.org/10.1007/978-981-10-0315-8_13)
- Andresen, L., Boud, D., & Cohen, R. (2000). Experience-based learning. In Foley, G. *Understanding Adult Education and Training*, (pp. 225-239). <https://doi.org/10.4324/9781003118299-22>
- Archer-Kuhn, B., & Mackinnon, S. (2020). Inquiry-based Learning in Higher Education: A Pedagogy of Trust. *Journal of Education and Training Studies*, 8, 1. <https://doi.org/10.11114/jets.v8i9.4929>
- Archer-Kuhn, B., Samson, P., Damianakis, T., Barrett, B., Matin, S., & Ahern, C. (2021). Transformative learning in field education: Students bridging the theory/practice gap. *The British Journal of Social Work*, 51(7), 2419-2438.
- Baartman, L. K. J., & Ruijs, L. (2011). Comparing students' perceived and actual competence in higher vocational education. *Assessment & Evaluation in Higher Education*, 36, 385-398. <https://doi.org/10.1080/02602938.2011.553274>
- Biggs, J. (2014). Constructive alignment in university teaching. *Higher Education Research and Development Society of Australasia, Vol. 1* (July), 5-22. <https://www.herdsa.org.au/herdsa-review-higher-education-vol-1/5-22>
- Boud, D. (2022). *Assessment Futures*. Retrieved 1/8/2022 from <https://www.uts.edu.au/research-and-teaching/learning-and-teaching/assessment-futures>
- Bowen, J. (1981). Education and the Enlightenment: The Conceptual Revolution. In *History of Western Education: Modern West* (3 ed., pp. 35). Routledge.
- Bowen, R. (2017). *Understanding by Design*. Retrieved Aug 4 2022 from <https://cft.vanderbilt.edu/understanding-by-design/>.
- Bowers, E., & Pack, M. (2017). Designing and embedding authentic learning opportunities in a social work curriculum: Reflections and lessons learned. *Aotearoa New Zealand Social Work*, 29 (99-110). <https://doi.org/10.11157/anzswj-vol29iss1id371>
- Brame, C. (2016). *Active learning*. Vanderbilt University Center for Teaching. <https://cft.vanderbilt.edu/active-learning/>.
- Carless, D., & Boud, D. (2018). The development of student feedback literacy: enabling uptake of feedback. *Assessment & Evaluation in Higher Education*, 43(8), 1315-1325. <https://doi.org/10.1080/02602938.2018.1463354>
- Crespo, R. M., Najjar, J., Derntl, M., Leony, D., Neumann, S., Oberhuemer, P., Kloos, C. D. (2010). Aligning assessment with learning outcomes in outcome-based education. In IEEE EDUCON 2010 Conference, Education Engineering (EDUCON), IEEE (pp. 1239-1246).
- Damianakis, T., Barrett, B., Archer-Kuhn, B., Samson, P., Matin, S., & Ahern, C. (2019). Teaching for Transformation: Master of Social Work Students Identify Teaching Approaches That Made a Difference. *Journal of Transformative Education*, 0(0). <https://doi.org/10.1177/1541344619865948>
- Dean, B., Eady, M., Glover Chambers, T., Moroney, T., O'Donnell, N., & Yanamandram, V. (2019). *WIL@UOW: WIL Pedagogy Overview*.
- Fang, W.-T., Hassan, A. A., & LePage, B. A. (2023). Outdoor Education. In *The Living Environmental Education: Sound Science Toward a Cleaner, Safer, and Healthier Future* (pp. 229-260). Springer Nature Singapore. [https://doi.org/10.1007/978-981-19-4234-1\\_8](https://doi.org/10.1007/978-981-19-4234-1_8)
- French, S. (2016). The benefits and challenges of modular higher education curricula. *Issues and Ideas*. <https://melbourne-cshe.unimelb.edu.au/resources/categories/occasional-papers/the-benefits-and-challenges-of-modular-higher-education-curricula>
- Haggis, T. (2003). Constructing Images of Ourselves? A Critical Investigation into 'Approaches to Learning' Research in Higher Education. *British Educational Research Journal*, 29(1), 89-104. <https://doi.org/10.1080/0141192032000057401>
- Hansen, E. J. (2011). *Idea-Based Learning : A Course Design Process to Promote Conceptual Understanding*. Stylus Publishing, LLC. <http://ebookcentral.proquest.com/lib/vu/detail.action?docID=911861>

- Harmon-Jones, E., Harmon-Jones, C., & Levy, N. (2015). An action-based model of cognitive-dissonance processes. *Current Directions in Psychological Science*, 24(3), 184-189. <https://doi.org/10.1177/0963721414566449>
- Harvey, M., Coulson, D., & McMaugh, A. (2016). Towards a theory of the ecology of reflection: Reflective practice for experiential learning in higher education. *Journal of University Teaching and Learning Practice*, 13. <https://doi.org/10.53761/1.13.2.2>
- Herrington, J., Parker, J., & Boase-Jelinek, D. (2014). Connected authentic learning: Reflection and intentional learning. *Australian Journal of Education*, 58(1), 23-35. <https://doi.org/10.1177/0004944113517830>
- Hoggan, C. D. (2016). Transformative Learning as a Metatheory: Definition, Criteria, and Typology. *Adult Education Quarterly*, 66(1), 57-75. <https://doi.org/10.1177/0741713615611216>
- Kaider, F., Hains-Wesson, R. (2017). Practical typology of authentic work-integrated learning activities and assessments. *Asia-Pacific Journal of Cooperative Education*, 18, 153- 165.
- Kift, S., Nelson, K., & John, C. (2010). Transition pedagogy: a third generation approach to FYE - a case study of policy and practice for the higher education sector. *International Journal of the First Year in Higher Education*, 1. <https://doi.org/10.5204/intjfyhe.v1i1.13>
- Kolb, A. Y. a. K., David A (2017). Experiential learning theory as a guide for experiential educators in higher education, *Experiential Learning & Teaching in Higher Education*., 1(1). <https://nsuworks.nova.edu/elthe/vol1/iss1/7>
- Kolb, D. (1984). *Experiential Learning: Experience As The Source Of Learning And Development* (Vol. 1).
- Kong, Y. (2021). The role of experiential learning on students' motivation and classroom engagement. *Front Psychol*, 12, 771272. <https://doi.org/10.3389/fpsyg.2021.771272>
- Lave, J., & Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation*. Cambridge University Press. [https://doi.org/DOI: 10.1017/CBO9780511815355](https://doi.org/DOI:10.1017/CBO9780511815355)
- Lewin, K. (1936). Psychology of Success and Failure. *Occupations: The Vocational Guidance Journal*, 14(9), 926-930. <https://doi.org/https://doi.org/10.1002/j.2164-5892.1936.tb00275.x>
- Mariani, L. (1997). *Teacher support and teacher challenge in promoting learner autonomy*. Retrieved 23 from <http://www.learningpaths.org/papers/papersupport.htm>
- Matsuo, M. (2015). A Framework for Facilitating Experiential Learning. *Human Resource Development Review*, 14(4), 442-461. <https://doi.org/10.1177/1534484315598087>
- McCluskey, T., Weldon, J., & Smallridge, A. (2019). Re-building the first year experience, one block at a time. *Student Success*, 10(1), 1-15. <https://doi.org/10.5204/ssj.v10i1.1148>
- Motley, P., Archer-Kuhn, B., Hondzel, C. D., Dobbs-Oates, J., Eady, M., Seeley, J., & Tyrrell, R. (2024). Defining Immersive Learning. *Teaching and Learning Inquiry*, 12.
- Newmann, F., & Wehlage, G. (1993). Five Standards of Authentic Instruction. *Educational Leadership*, 50.
- Payne, P. G., & Wattchow, B. (2008). Slow pedagogy and placing education in post-traditional outdoor education. *Journal of Outdoor and Environmental Education*, 12(1), 25-38. <https://doi.org/10.1007/BF03401021>
- Picknoll, D., Down, M., & Hands, B. (2023). The nature and scope of Outdoor Education in Western Australia. *Journal of Outdoor and Environmental Education*, 26(2), 269-282. <https://doi.org/10.1007/s42322-023-00129-1>
- Rosier, J., Slade, C., Perkins, T., Baldwin, C., Coiacetto, E., Budge, T., & Harwood, A. (2016). The benefits of embedding experiential learning in the education of planners. *Planning Practice & Research*, 31(5), 486-499. <https://doi.org/10.1080/02697459.2016.1229899>
- Russell, H., Fitzgerald, R., Meth, D., & Huijser, H. (2023). A High Impact Program Design Framework to Support Future Focused Curriculum Design. In E. Sengupta (Ed.), *High Impact Practices in Higher Education: International Perspectives* (Vol. 51, pp. 29-44). Emerald Publishing Limited. <https://doi.org/10.1108/S2055-364120230000051003>
- Samarawickrema, G. C., K. (2021). Block mode study: Opportunities and challenges for a new generation of learners in an Australian university. *Student Success*, 12(1), 13–23. <https://doi.org/10.5204/ssj.1579>
- Samarawickrema, G. C., K. Male, S. and McCluskey, T. (2022). 'Assessment in Intensive Modes of Study', *Designing Learning for Intensive Modes of Study*. Higher Education Research and Development Society of Australasia.
- Sengupta, E. (2023). Introduction to High Impact Practices in Higher Education: International Perspectives. In E. Sengupta (Ed.), *High Impact Practices in Higher Education: International Perspectives* (Vol. 51, pp. 3-12). Emerald Publishing Limited. <https://doi.org/10.1108/S2055-364120230000051001>

- Smallridge, A. (2019). *First Year College Report*.
- Smith, M., Brooks, S., McIlveen, P., Torjul, P., Tyler, J., & City. (2007). *Career development learning: Maximising the contribution of work integrated learning to the student experience*.
- Snowden, D. (2011). Cynefin, A Sense of Time and Place: an Ecological Approach to Sense Making and Learning in Formal and Informal Communities.
- Spence, K. K., & McDonald, M. A. (2015). Assessing Vertical Development in Experiential Learning Curriculum. *Journal of Experiential Education*, 38(3), 296-312.  
<https://doi.org/10.1177/1053825915571749>
- Wiggins, G., & McTighe, J. (2005). *Understanding by Design*. Association for Supervision & Curriculum Development. <http://ebookcentral.proquest.com/lib/vu/detail.action?docID=3002118>
- Wilson, K., Devereux, L. (2014). Scaffolding theory: High challenge, high support in Academic Language and Learning (ALL) contexts. *Journal of Academic Language and Learning*, 3(8), A91-A100., Article 353.  
<https://journal.aall.org.au/index.php/jall/article/view/353>
- Winkelmes, M.-A., Boye, A., Tapp, S., Felten, P., & Finley, A. P. (2019). *Transparent design in higher education teaching and learning : a guide to implementing the transparency framework institution-wide to improve learning and retention/* edited by Mary-Ann Winkelmes, Allison Boye, and Suzanne Tapp ; foreword by Peter Felten and Ashley Finley. In (First edition. ed.): Stylus Publishing.
- Wu, J., Li, M., Xu, H., & Chang, W.-S. (2016). Kolb Learning Cycle. In *Leaning by doing*.
- Xerri, M., Radford, K., & Shacklock, K. (2018). Student engagement in academic activities: a social support perspective. *Higher Education*, 75. <https://doi.org/10.1007/s10734-017-0162-9>