

Overall Student Satisfaction at Tabor School of Education: An Examination of Key Factors Based on the AUSSE SEQ

Francisco Ben, Tracey Price, Chad Morrison, Victoria Warren, Willy Gollan, Robyn Dunbar, Frank Davies, Mark Sorrell

Abstract—This paper focuses particularly on the educational aspects that contribute to the overall educational satisfaction rated by Tabor School of Education students who participated in the Australasian Survey of Student Engagement (AUSSE) conducted by the Australian Council for Educational Research (ACER) in 2010, 2012 and 2013. In all three years of participation, Tabor ranked first especially in the area of overall student satisfaction. By using a single level path analysis in relation to the AUSSE datasets collected using the Student Engagement Questionnaire (SEQ) for Tabor School of Education, seven aspects that contribute to overall student satisfaction have been identified. There appears to be a direct causal link between aspects of the Supportive Learning Environment, Work Integrated Learning, Career Readiness, Academic Challenge, and overall educational satisfaction levels. A further three aspects, being Student and Staff Interactions, Active Learning, and Enriching Educational Experiences, indirectly influence overall educational satisfaction levels.

Keywords—Tertiary student satisfaction, tertiary educational experience, pre-service teacher education, path analysis.

I. INTRODUCTION

OVER the past two decades, numerous studies have been conducted on student satisfaction and engagement at universities (e.g., [1]-[5]). Seeking student feedback about all aspects of their academic life has become a vital undertaking by universities and other tertiary institutions worldwide. Rowley (cited in [6, pp. 252-253]) identified the following key reasons why universities collect student feedback:

- to provide auditable evidence that students have had the opportunity to pass comment on their courses and that such information is used to bring about improvements;
- to encourage student reflection on their learning;
- to allow institutions to benchmark and to provide indicators that will contribute to the reputation of the university in the marketplace; and
- to provide students with an opportunity to express their level of satisfaction with their academic experience.

The final point crucially holds significant bearing towards student retention.

In the context of this study, students are, with regard to the

profession of their field of study, also referred to as pre-service teachers. The terms ‘students’ and ‘pre-service teachers’ will be used interchangeably throughout this paper. Tabor student satisfaction is defined as an attitude resulting from an evaluation of a student’s educational experience where actual performance meets or exceeds expectations [3]. A student’s educational experience is composed of academic as well as selected non-academic and social aspects collectively known as student engagement [7]. Krause and Coates [7] also note that the concept of engagement embraces a specific understanding of the relationships between students and institutions. Universities and other tertiary institutions are tasked to create learning environments that afford opportunities for students to learn. Thus, student engagement is an idea focused on students and their interactions with their institution. It rests on the premise that learning is influenced by how an individual participates in educationally purposeful activities, and on how institutions and staff generate conditions to stimulate involvement [8, p. 1].

Enhancing student engagement in tertiary institutions is of paramount importance. Radloff explains that:

Measures of student engagement provide information about individuals’ intrinsic involvement with their learning, and the extent to which they are making use of available educational opportunities. Such information enhances knowledge about learning processes, can be a reliable proxy for understanding students’ learning outcomes and provides excellent diagnostic measures for learning enhancement activities. [9, p. vii].

If conditions to stimulate involvement are met, then students generally feel “satisfied” in their academic experiences. Student engagement, therefore, is seen as fundamental to quality tertiary education.

Although Tabor ranked first in terms of overall student satisfaction in its three years of participation in the AUSSE study, investigations of this paper provide insight into ways in which various aspects of student engagement might be further improved, particularly in the School of Education, to provide future students with the best possible academic experience. Other tertiary institutions may also find the results and processes of this study of use in evaluating their programs and any corresponding educational opportunities that they afford their students. Thus, in relation to Tabor’s School of Education, this paper aims to:

Francisco Ben, Tracey Price, Chad Morrison, Victoria Warren, Willy Gollan, Robyn Dunbar, Frank Davies, Mark Sorrell are with the School of Education, Tabor College of Higher Education, Millswood, SA 5034 Australia (phone: +61 8 8373-8777; fax: +61 8 8373-1766; e-mail: fben@adelaide.tabor.edu.au).

- (a) Examine student engagement using the AUSSE SEQ scales and their influence on students' overall satisfaction, particularly the extent to which each construct, as defined in the SEQ scales, interact with the other constructs to influence students' overall satisfaction.
- (b) Present an analytical model that provides a graphical representation and in-depth discussion of the relationships between the constructs.

II. THE AUSSE

The AUSSE was an annual survey undertaken by students enrolled in higher education institutions in Australia and New Zealand. These institutions constitute both Government and Private, including Institutes of Technology, Polytechnics and Private Training Establishments [8]. The ACER coordinated and managed the AUSSE study in close collaboration with participating institutions. According to ACER, the AUSSE is closely linked to the North American National Survey of Student Engagement (NSSE). It provides higher education institutions data that they can use to attract, engage and retain students, with the intention to provide new and significant perspectives for managing and enhancing the quality of education [9].

The AUSSE used the SEQ, under license from the Center for Postsecondary Education at Indiana University, to measure students' participation in effective educational practices, and to assess whether institutions support such engagement [10]. The SEQ contains items that operationalize the concept of student engagement. A selection of SEQ items are grouped together psychometrically to measure seven summary scales including Academic Challenge, Active Learning, Student and Staff Interactions, Enriching Educational Experience, Supportive Learning Environment, Work Integrated Learning, and Career Readiness [11]. An outcomes measure called Overall Satisfaction is also included in the SEQ. A summary of the scales used in the SEQ is shown in Table 1. All SEQ items were validated using a range of psychometric and conceptual analyses including reliability, differential item functioning, and Rasch item response modeling [9], [10].

TABLE I
SEQ SCALE DESCRIPTIONS ([10, p.2])

Scale	Label	Description
Academic Challenge	AC	Extent to which expectations and assessments challenge students to learn
Active Learning	AL	Students' efforts to actively construct their knowledge
Student and Staff Interactions	SSI	Level and nature of students' contact with teaching staff
Enriching Educational Experiences	EEE	Participation in broadening educational experiences
Supportive Learning Environment	SLE	Feelings of legitimization within the university context
Work Integrated Learning	WIL	Integration of employment-focused work experiences into study
Career Readiness	CRE	Preparation for participation in the professional workforce
Overall Satisfaction	OVL	Students' overall satisfaction with their educational experience

According to ACER [10, p. 3], the SEQ is an instrument

“specifically designed to measure a reasonably large number of aspects of student engagement”. Thus, this study used the scales employed in the AUSSE study to measure the aspects of educational experience of students at Tabor School of Education.

III. TABOR'S PARTICIPATION IN THE AUSSE

Tabor participated in the AUSSE study for three years (2010, 2012 and 2013). Table II shows a break down by year of the Tabor population and response statistics. The sample respondents came from the three Schools of Tabor: School of Education, School of Humanities and Social Sciences, and School of Ministry, Theology and Culture. This paper is specific to the analysis of the School of Education data.

TABLE II
POPULATION AND RESPONSE STATISTICS FOR TABOR [8], [9], [11].

	First Year	Later Year
2010		
Respondents	72	117
Target population size	173	293
Response rate	42	40
2012		
Respondents	48	89
Target population size	104	183
Response rate	46	49
2013		
Respondents	53	86
Target population size	105	217
Response rate	50	40

IV. ANALYSIS OF THE TABOR SCHOOL OF EDUCATION AUSSE DATA

The Tabor School of Education data from the AUSSE study for First and Third Year pre-service teacher students in 2010, 2012 and 2013 were analyzed. Permission was granted by ACER to use institution-specific data collected using the SEQ. Since the SEQ used scales to measure aspects of student engagement, statistical analyses techniques were employed to analyze the data.

Due to potential issues that could arise in the interpretation of statistical analysis results from small sample sizes, data from all three years were combined to form a single data set.

TABLE III
NUMBER AND COMPOSITION OF PARTICIPANTS FROM TABOR SCHOOL OF EDUCATION

Year of Participation	First Year	Third Year
2010	31	41
2012	25	27
2013	21	32
Total	77	100

A total of 177 first and third year Education students participated in the AUSSE study as shown in Table III.

The AUSSE data consist of raw scores converted to measures using various ability estimation methods (e.g., Maximum Likelihood Estimation, and Weighted Likelihood

Estimation). These measures were used in the statistical analyses. For details of how the AUSSE data was collected, please refer to AUSSE study reports published by ACER (www.acer.edu.au).

The normality of data was tested before further analyses were undertaken. Having the data normally distributed provides a very good model for the observed frequency distribution for naturally occurring events, enabling sound statistical analyses and interpretation. Skewness and kurtosis (as indicators of normality) were tested to determine if the data collected for each of the factors were normally distributed. Critical values for skewness and kurtosis, as suggested by Kline [12] were <3 and <8 , respectively. None of the variables identified in this study showed skewness greater than 3 and kurtosis greater than 8. The test for normality was performed using the IBM Statistical Package for the Social Sciences (SPSS) software [13].

Single level path analysis, which is essentially a structural equation modeling technique, was carried out to obtain a pictorial representation of the interaction of the different factors identified in this study and how they impact student satisfaction. In other words, this pictorial representation (or model) can be seen as a representation of causal relationships. Path analysis indicates independent, intermediary, and dependent variables, and aims to provide estimates of the magnitude and significance of the hypothesized variable interactions shown through a path diagram. Single level path analysis was considered adequate since the data extracted from the AUSSE dataset only contain one distinct group at one distinct level. This analysis technique provided an “aggregated” composite of the interaction between the identified variables. The Linear Structural Relations (LISREL) Version 8.8 [14] statistical software was used to carry out path analysis.

V. ANALYSIS RESULTS

A model resulting from undertaking path analysis using the Tabor School of Education AUSSE data is shown in Fig. 1. The model generated consists of seven scales and an outcomes measure. The scales include Supportive Learning Environment (SLE), Work Integrated Learning (WIL), Career Readiness (CRE), Academic Challenge (AC), Student and Staff Interactions (SSI), Active Learning (AL), and Enriching Educational Experience (EEE). Overall Student Satisfaction (OVL) is the outcomes measure used in the model. All of the seven scales have been hypothesized to influence the outcomes measure, thus subjecting them to path analysis. Only the significant paths ($P < 0.01$) showing the standardized path coefficient and t -values (in parentheses) are included in the diagram presented.

A. Influences on Overall Student Satisfaction

Based on the path analysis results using the Tabor School of Education data, there are four factors that could have an influence on overall student satisfaction (OVL). Beginning with the leftmost factors in the path diagram (Fig. 1), Work Integrated Learning (WIL, 0.27, $t = 3.54$ at $P < 0.01$) shows a

significant positive influence on OVL. This indicates that higher student satisfaction in pre-service teacher education could result from more effective work integrated learning experiences (i.e., the professional experience component of the pre-service teaching program). This result is generally consistent with similar studies (e.g., [15], [16]) where students who experience greater amounts of effective work integrated learning in their tertiary studies are more likely to experience greater student satisfaction.

Supportive Learning Environment (SLE, 0.30, $t = 4.23$ at $P < 0.01$) likewise has a significant positive association with OVL. This result could be expected, as students who experience a supportive learning environment are most likely to cite satisfaction with their tertiary student experience. Similar studies including Whannell [17], McDonald [18], and Bradley, Noonan, Nugent and Scales [19] confirm this finding.

Another factor appearing to have significant influence on OVL is Academic Challenge (AC, 0.14, $t = 2.05$ at $P < 0.01$). This result suggests that provision of challenging academic tasks, in addition to high expectations of quality performance in practical teaching in schools, contribute to students' overall satisfaction. However, this interpretation might be received as unformulated, hence sharper operationalization of the term and a more thorough investigation are warranted. In addition, there is clear opportunity presented here to examine the relationship between academic challenge and student satisfaction due to lack of related published works.

An important aspect of student experience at tertiary level is confidence in being ready to build a career after graduation. Hence, the path diagram in Fig. 1 showing Career Readiness (CRE) having a direct, albeit negative, association with OVL. The negative relationship might be interpreted as counter-intuitive. However, Mayer et al. [20] explain that student perception of career readiness is complex and dynamic, and so cannot be causally linked to characteristics of their initial teacher education (ITE) program. In addition, since the first and third year data were combined (to overcome the challenges of statistically analyzing small sample sizes), data “noise” could have resulted. This “noise” may emanate from the real possibility that the perceptions of career readiness of first year students and third year students are vastly different. At the time of survey first year students may still have been adjusting to their tertiary studies environment and will have had less work integrated practice (Professional Experience in schools), and so felt a lesser sense of readiness for a future teaching career. Thus, this result prompts further (and deeper) investigation; surveying a larger sample size and including final year students may paint a different picture.

B. Other Likely Influences on Overall Student Satisfaction

An indirect effect is demonstrated where a variable affects another variable through intermediate variable(s). This could also be indicated in a path analysis. Obtaining the effect of one variable on another variable through a third (or fourth, or fifth, etc.) variable means multiplying the individual effects in its “indirect” path (similar to calculating the resultant of two or more vectors) [21]. The product of the individual effects in an

indirect path represents the proportion of variance explained by that path.

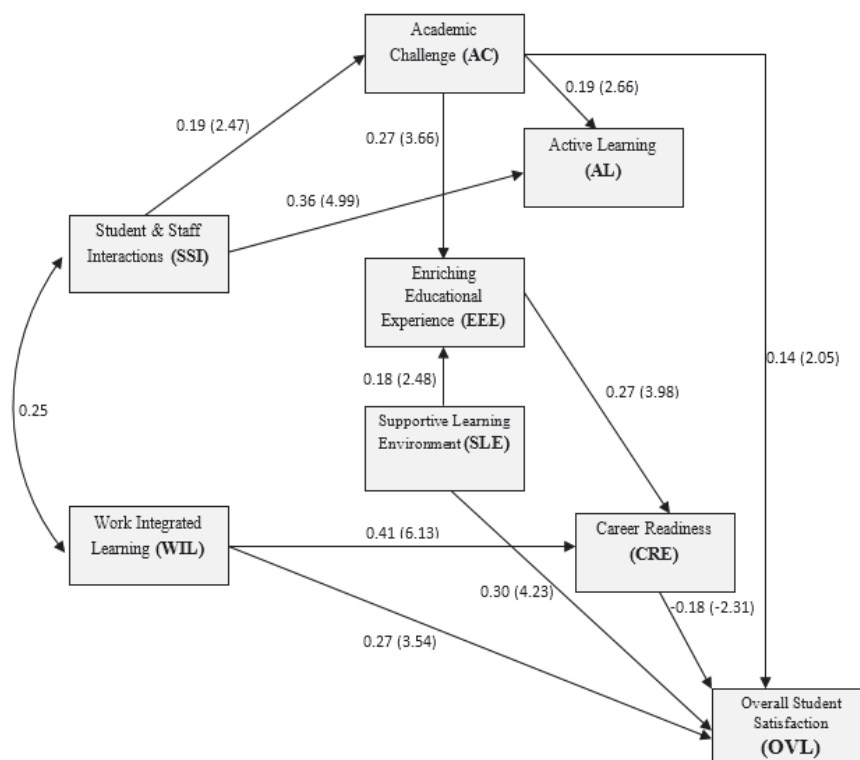


Fig. 1 Path diagram showing factors that significantly influence overall student satisfaction

With reference to Fig. 1, through the interactions between factors, it can be observed that OVL can indirectly be influenced by AC through EEE and CRE, with a total indirect effect of $0.27 \times 0.27 \times 0.18 = 0.013$, which is considered small. In other words, this indirect path explains only 1.3% of the direct relationship between academic challenge (AC) and overall student satisfaction (OVL). Similarly, WIL has an indirect effect on OVL through CRE (with a total indirect effect of 0.07) which explains approximately 7% of the direct relationship between work-integrated learning (WIL) and overall student satisfaction. This is an indication of the importance of providing students with enough effective professional experience to elicit confidence in their ability to begin a teaching career. This then could lead to their overall satisfaction of their pre-service teaching course experience. In addition, SSI through AC has an indirect effect on OVL (total = 0.03 or 3%). Furthermore, SSI can also indirectly affect OVL through AC, EEE and CRE albeit the total effect being very small (0.002 or 0.2%). This means that the indirect path only accounts for less than 1% of the direct relationship between SSI and OVL. This indirect path therefore can be disregarded. Another indirect path disregarded due to very small total effect is SLE on OVL through EEE and CRE.

As shown in Fig. 1, it is of interest to note that some of the factors examined (WIL, AC and SLE) showed both direct and indirect effect on students' overall satisfaction. This result

highlights the importance of the interactions of the different factors examined in this study and how they impact student satisfaction.

VI. DISCUSSION

Over three AUSSE SEQ surveys (SEQ 2010, 2011, 2013), Tabor School of Education data indicated consistently excellent levels of student satisfaction with their overall educational experience (OVL). Key factors contributing directly to OVL include the following:

- Supportive Learning Environment;
- Work Integrated Learning;
- Career Readiness; and
- Academic Challenge.

Additional supporting factors indirectly influencing OVL are:

- Student and Staff Interactions;
- Active Learning; and
- Enriching Educational Experience

A. Supportive Learning Environment

Supportive Learning Environment (SLE) is shown in this study to directly influence overall student satisfaction (OVL) (see Fig. 1). A supportive learning environment contributes directly to the high level of student satisfaction among Education students at Tabor. The supportive learning

environment for pre-service teachers at Tabor can be defined as a synchronized approach incorporating interactive lectures with a small to medium size cohort, promotion of pre-service teacher scholarly and professional identity, consistent student support through accessibility to lecturing staff, and a culture that accepts and differentiates learning to meet the diverse needs of students.

Supportive learning is enacted as a culture for pre-service teachers within the School of Education. An interactive lecturing approach provides opportunity for lecturers to model best teaching practices. Lectures are compulsory and are designed to develop metacognitive skill, defined as 'strategies to learn effectively' [22]. Within a typical lecture pre-service teachers are guided through theoretical content, ask questions, and work in small groups to consolidate ideas and understandings or solve problems; this also extends to role play and micro teaching opportunities. Tabor School of Education students typically learn within a small to medium sized class cohort. Class size is a factor in managing effective cooperative learning. Although the research is divided regarding class size and academic achievement, McDonald [18] concludes that higher level outcomes such as development of thinking, problem solving and motivation are impacted by the cooperative learning possible with smaller groups. Bradley, Noonan, Nugent and Scales [19] found that opportunity for students to learn cooperatively with smaller staff-student ratios also increased levels of student satisfaction.

An interactive lecture approach consolidates engagement, and affirms positive learning journeys for pre-service teachers. A shift from the traditional teacher centered approach toward student centered learning is particularly beneficial to pre-service teachers – 'developing sociability, interdependence, communication skills, leadership qualities and professional ethics' [23]-[25]. Maintaining academic rigour and incorporating critically reflective and cooperative learning strategies allows students to process their learning in a supportive lecture environment, where positive feedback, affirmation and opportunities to explore ideas and applications further are present. Building cooperative learning activities into the lectures has the twofold effect of developing cognitive and social skills. Behavioural engagement is increased as pre-service teachers are encouraged to interact with the lecturer and their peers. Sharing ideas and experiences in small groups enables reflective practice and establishment of individual and peer identities for pre-service teachers. Scott [26] identifies strong links between retention, success, and the extent to which students are linked to fellow learners as markers for student satisfaction at tertiary level. Supporting learning in this way has academic, social and psychological benefits [27]. A main focus here is in supporting the 'scholarly' and 'professional' identity of pre-service teachers; supporting learning, developing content knowledge, and importantly higher order thinking skills, links to a sense of autonomy and ownership for students. Honouring the voices [28] of pre-service teachers supports their professional identity development.

There is a strong focus on student engagement within Education lectures at Tabor. Reeve [29] defines engagement as behavioural, emotional and cognitive, and also agentic – where students are supported to become autonomous. The characteristics of autonomy support include:

taking the students' perspective, welcoming their thoughts, feelings, and behaviors into the delivery of instruction, and providing learning activities that vitalize...students' inner motivational resources within lectures ([29, p. 592]).

Accessibility to staff has emerged as an important factor in students' learning experience ([17], [19]). Facilitating interactive lectures heightens dialectical transactions between lecturers and pre-service teachers, allowing space for supportive learning. This also links to students having clear goals and understandings regarding assessment requirements – lectures can also incorporate workshop time which allows students to access peer and lecturer guidance for assessment preparation. Johnson, Johnson and Smith's [30] assertion that students learn together but perform alone shows the underlying tension pre-service teachers face regarding assessment. Despite learning together there is an individual accountability to perform. In a study by Whannell [17] academic staff support was shown to be a strong positive link to emotional commitment and academic identity. Support and specific guidance, both in peer settings and individually, eases this individual accountability tension, and interactive strategies within workshops allow pre-service teachers to affirm and refine their learning styles.

As well as access to Education lecturing staff within lectures at Tabor, support is also offered to pre-service teachers through Academic Advisors; full time lecturing staff members who take on the role of mentors to pre-service teachers for the duration of their degree. Individual support is offered, as required, to meet a range of diverse needs that may impact study for pre-service teachers. This support may take the form of regular weekly support or short term support to manage the processes of academic study through illness or other personal circumstances. Involvement of academic staff to engage appropriately with pre-service teachers in a supportive role, can act as an intervention which builds a positive tertiary academic identity and emotional commitment [17]. All of this contributes to enriching the educational experiences of the students which could be a contributing factor to their feeling of career readiness which ultimately leads to their overall satisfaction (see Fig. 1).

B. Work Integrated Learning

As shown in Fig. 1, work integrated learning (WIL) appears to have a direct influence on overall student satisfaction (OVL). According to Universities Australia [31], WIL is about integrating theory with practical work experience in education, and is well-established in the area of teaching. In other words, WIL provides learning experiences for students while demonstrating their graduate skills to employers. WIL has become a significant part of university student experience in most Australian universities and tertiary institutions to

improve career readiness of graduates. Rayner and Papakonstantinou [15] have found WIL to be useful to undergraduates especially in terms of non-academic learning and career development particularly when they enable sufficient student involvement.

Professional Experience placements (PEPs) provide work integrated learning for pre-service teachers. Tabor School of Education requires its pre-service teachers to complete a total of 110 days of PEP in various school settings, exceeding the required minimum total of 80 days. Pre-service teachers from Tabor also receive optimum support during placements from the close working relationships between Professional Experience Liaisons and Mentor Teachers. Tabor implements an integrated approach to PEP where University-Based Teacher Educators (UBTE) are employed to work directly with pre-service teachers and school-based mentor teachers and coordinators. This role places UBTEs in schools and in direct dialogue and interaction with pre-service teachers and their teaching contexts. At a time when initial teacher education providers are under financial pressure to withdraw UBTEs from PEP [32], Tabor continues to support the vital connections between teacher educators and school-based colleagues. This integration of theory and practice within PEP, through the interactions between teams of educators, is of vital importance to the development of pre-service teachers and the strength of the PEP program overall [33]. This is realised through the provision of close support of pre-service teachers and their mentors, feedback from teams of educators at the point of need, and, continuous goal setting to stimulate rapid professional growth during placements.

C. Career Readiness

Career readiness (CRE) is shown in Fig. 1 to have a direct influence, albeit negative, on overall student satisfaction (OVL). The transition from pre-service to early career teaching is a challenging one [34]. Navigating this transition is filled with uncertainty and complexity [35] and the nature of this transition has implications across the career span [36]. The following discussion provides part explanation to the negative relationship between CRE and OVL. Notwithstanding, it is recommended that further research be undertaken in relation to career readiness and overall student satisfaction.

Pre-service teachers' perspectives about teaching are often disrupted by their experiences of abrupt career entry [37]. Australian graduate teachers often enter the workforce in hard-to-staff, educationally disadvantaged, and rural and remote schools [38], [39] with varied access to support structures and induction [34]. They regularly enter the profession in part-time or casual teaching roles, which further compound the complexity and intensify the uncertainty [40]. As a result, many tensions arise for early career teachers about how to manage the roles and their experiences within them [41], [42]. These factors lead to feelings of dissatisfaction with teaching and impact on early career teachers' intentions to remain teaching [43], [44] even when initially, as pre-service teachers, they felt they were quite ready to tackle challenges in the

teaching profession. Such complexities make it difficult to progress beyond the survival stage [45] and many early career teachers leave teaching prematurely [46].

Mayer et al. [20] explain that pre-service teachers' perceptions of career readiness incorporate a variety of complex beliefs across a range of domains. Perceptions of career readiness provide insights into the histories, experiences, preparation, achievements and aspirations of pre-service teachers. They continually filter important information about themselves and about teaching through their prior knowledge and experiences [47]. As such, these perceptions reflect the awareness that pre-service teachers hold of the complexities of teaching [48] while simultaneously revealing the idealistic motivations that they bring with them into their roles [49].

Pre-service teachers use their academic achievements and depth of curriculum knowledge as indicators of future capacity [50]. They also draw on the interactions they have with more knowledgeable others, like mentor teachers and school principals, to shape their perceptions in dynamic and responsive ways [51]. Pre-service teachers therefore learn a great deal about themselves and their future roles when learning through practice with others [52]. Conversely, where pre-existing perspectives are not challenged through experience or interaction, they can develop misconceptions about teaching and teachers' work and make subsequent over-estimations about their future capacity. These misconceptions and over-estimations therefore shape pre-service teachers' perceptions about career readiness [53].

Seeking pre-service teachers' perspectives about their career readiness is a way of acknowledging their voices [54]. Mayer et al. [20] found that the complex and dynamic perceptions of pre-service teachers cannot be causally linked to characteristics of their ITE program but that they do provide important insights about the focus of pre-service teachers' attention and previous experiences. Tabor student participants of the AUSSE study reported feeling as prepared as possible by their Initial Teacher Education program, despite areas where they felt under-prepared. This reflects the positive impact of Tabor School of Education's highly supportive learning environment and effective work integrated learning program. It also highlights how Tabor pre-service teachers are aware of the dynamic, evolving and multi-faceted nature of their perceptions about career readiness and how these individuals make continual critical and reflective assessments about themselves in relation to future roles, demands and expectations.

D. Academic Challenge

As shown in Fig. 1, the results of the path analysis suggest that Academic Challenge (AC) has a direct influence on overall student satisfaction (OVL). Academic Challenge can be considered a broad term encompassing a number of aspects. Within an environment of high support (as previously discussed in this paper), Tabor School of Education students are overtly encouraged to face the challenge of developing and maintaining self-responsibility for their learning. This requires

student motivation to increase knowledge, to sustain commitment to learning, and to develop self-responsibility with study skills such as organization and research. Personal organizational skills include taking responsibility for own learning, managing workload, completing assignments on or before due dates, and maintaining a minimum Credit grade average throughout their course. Knowledge development pertains to a student's wider research and learning beyond lecture material. Interactive lectures and final assessments involve students in authentic pedagogical tasks that are rich, robust and rigorous, often requiring engagement of higher order and critical thinking skills. The high levels of support and respectful interactions between staff and students at Tabor creates a high safety and high trust factor that encourages and enables students to take risks in theoretical learning and practise of pedagogical skills.

Generally, it is assumed that tertiary students prefer to experience academic challenge as this prepares them to enter the workforce ready to take on greater challenges. Tabor School of Education students are required to complete a total of 110 days of professional teaching placement, requiring sustained practice in up to three blocks between three and eight weeks' duration. This is some six full working weeks more than is offered by other tertiary institutions, adding to the academic challenge that Tabor pre-service teachers face. However, student learning and preparation is carefully scaffolded in this process, which is generally perceived by students as beneficial to their preparation as classroom teachers. Applied to many contexts, an academically challenging tertiary institution implementing a challenging curriculum produces well-prepared graduates with more confidence and a higher level of competency. Thus, academic challenge contributes to overall student satisfaction. It is important to note, however, that, according to Payne, Kleine, Purcell and Carter [55], the academic challenge scale used in the National Survey of Student Engagement (NSSE) – which was also used by the AUSSE study – does not fully capture many meanings of academic challenge. It is also likely that students' interpretation of "academic challenge" may be different from how academic staff members interpret it. This issue needs to be addressed; hence a follow up study is recommended.

In addition to the four factors directly influencing OVL discussed above, the following three factors, Student and Staff Interactions, Active Learning and Enriching Educational Experience have an indirect but equally significant relationship to overall student satisfaction.

E. Student and Staff Interactions

Student and Staff Interactions (SSI) is shown in Fig. 1 to indirectly influence OVL through previously discussed aspects of Academic Challenge (AC) and Work Integrated Learning (WIL). Tabor's consistently developed and pedagogically modelled culture of developing personal character and professional academic learning and teaching, underpinned by an authentically holistic worldview, contributes to consistent survey reporting of high levels of student (pre-service teacher)

satisfaction (OVL).

Noble and Henderson ([56, p. 79]) recognize that "undergraduate teacher education programs have been increasingly scrutinized regarding their (in)ability to adequately prepare students for the challenging social contexts that they will meet" in tertiary study and in future work contexts. Results from the AUSSE survey indicate, however, that over several years, students recorded high levels of satisfaction and career readiness with their undergraduate course at Tabor. A range of key factors contributed to this satisfaction, and Staff and Student Interactions is one.

As Richardson's [57, p. 2] briefing in relation to the AUSSE survey identifies, the data clearly indicates that high levels of student support given by quality staff-student interactions create high levels of student satisfaction. Richardson's briefing reinforces "the vital importance of sustained, significant and meaningful contact between staff and students [needed] if the quality of teaching and learning in Australian higher education is to be optimised".

Establishment of social networks and meaningful relationships with peers and with academic staff can facilitate students' sense of belonging to the institution and increase their awareness of the support offered [58]. In such an environment students persist with their studies [59] and achieve academic success [60] through greater engagement in learning. Robinson [61, p. 71] reminds us that "the heart of education is the relationship between the student and the teacher". In terms of assisting new students to transition successfully to first year tertiary studies, the University of Southern Queensland (USQ), for example, incorporated a program to allow students, throughout the year, to meet with peers and academic staff to discuss issues of concern, ask questions, raise fears and to develop a relationship. Noble and Henderson [56] show the success of this program in that it developed a climate of trust and connectedness between staff and students, enabled the development of reflectively critical conversations, linked in with students needs to develop character, and increased academic results.

The USQ program was conducted for students identified as 'at risk', and run as adjunct to the usual academic course structure. In contrast, Tabor students recorded high levels of satisfaction in both first and third year surveys as the School of Education staff (academic and administrative) treat all students as beginning teachers, developing their professional identity and understanding of that identity throughout their course. This develops in students a perception of being a step beyond the status of 'student', which engenders greater awareness of what 'professional' means, and leads to their increased professional practice in learning (study) and in teaching (professional Practice experiences). This methodological approach by staff links with aspects of Work Integrated Learning (WIL) by placing pre-service teachers in a shared teaching space with lecturers; creating a balanced power relationship and encouraging shared learning as teachers together. This increases pre-service teachers' understanding of vocabulary associated with the profession of teaching, increasing their capacity for and effectiveness in

relating from a critical reflective and professional focus.

Tabor School of Education students' high satisfaction levels reflect their increased capacity to engage in Academic Challenge (AC). Where supported by effective Staff and Student Interactions, Tabor pre-service teachers learn about the importance of personal and professional values and character, and are gently but consistently enabled to accept the challenge of character development. Noble and Henderson ([56, p. 83]) allude to "the characteristics that are usually associated with character education" which emerge in conversations within their Transition Program; 'fairness, trustworthiness, caring, and community participation' and cite supporting authors such as Kagan [62], and Lovat and Toomey [63]. Tabor pre-service teachers learn from such texts as part of their education studies with regard to understanding character qualities in relation to themselves and their future students. Palmer's [64, p. 2] concept that "we teach who we are" is the underpinning refrain for their studies, in light of which pre-service teachers are encouraged to consider ways in which they need to develop in order to be effective people and effective teachers. Donnison and Edwards [65] agree that a significant factor in successful pre-service teacher engagement in their course is staff respect of students' personal values, as well as communication with students about how their values interact with their understanding regarding learning and teaching theory and practice. In both lecture based discussions, across the range of subjects, and in pastorally focused staff academic support of students, Tabor employs a future focus to enable pre-service teachers to celebrate their values and relative readiness at varying points during the course whilst simultaneously being excited about the learning and changes, personal and professional, still to come.

As previously discussed in this paper (SLE), every pre-service teacher has access to an Academic Advisor, who is a full time academic member of staff. The Academic Advisor is available for one-to-one assistance with any aspect of need; personal or academic. Browne, Kaldenberg, Browne and Brown [2, p. 3] identify that student perception of satisfaction is multidimensional but showed that "students with less clear goals tended to base...satisfaction judgements on the educational process and the educational environment". Interactions with the service provider are "especially critical" ([2, p. 3]). Tabor School of Education Academic Advisor provision allows students opportunity and freedom to develop clear personal and academic goals. Although this relationship is formally initiated by the student, it is staff who formally and informally encourage them to do so. Combined with the highly relational and interactive nature of lectures and the consistently articulated expectations of student professional communication with all school of education staff, 'sustained and substantial contact' ([57, p.7]) occurs. Thus, high quality relationship is enabled. An important aspect of such relationship is that students have lecturers who not only connect with them but who believe in them [61] as people and future colleagues.

Methods of teaching at Tabor reflect a belief in the value of empowering students [61] to learn how to learn through

reflective and critical thinking. Working together with lecturers who believe in their abilities, combined with rich, rigorous and robust learning experiences and assessment, students are encouraged to take learning risks and to accept challenges in all aspects of their personal and professional development.

F. Active Learning

Fig. 1 indicates that Active Learning (AL) has a statistically insignificant impact on OVL; rather it appears to be a by-product of Staff and Student Interactions (SSI) and Academic Challenge (AC). As already discussed in this paper, these latter two aspects contribute to Tabor School of Education students being active learners through academically challenging methodologies and high levels of positive staff and student interactions.

According to Prince [66, p. 1], "Active learning is generally defined as any instructional method that engages the students in the learning process". In addition, Ball and Perry [67] has explained that active learning is facilitated by students' participation in activities that involve constructing new knowledge and understanding. Satisfied students are those who are actively engaged in their learning. "More engaged learners are more satisfied, and vice versa. By enhancing students' engagement, institutions can enhance satisfaction with provision." ([68, p. 7])

As Bonwell notes, active learning strategies are those defined as "instructional activities involving students in doing things and thinking about what they are doing" [69, p. 7]. A clearly articulated expectation of Tabor's pre-service teachers is that they are not to be passive recipients of transferred knowledge [66]. Through an interactive learning environment that values praxis, methodologies and tasks including questioning, critical thinking and higher-order thinking tasks, open-ended activities, problem solving and structured small group work [70], lecturers and students share a love of inquiry and of teaching.

Within the Initial Teacher Education context, it is vital that Tabor's pre-service teachers understand that all students have a variety of learning styles. This necessarily translates into Tabor presenting lectures and workshops incorporating diversity, considering that "some cognitive research has shown that a significant number of individuals have learning styles best served by pedagogical techniques other than lecturing" ([69, p. iii]). Lecturers model pedagogical methods that students are then able to apply to their Professional Experiences in schools. Recognizing that "education is lifelong learning built on experience" ([70, p. 1]), students' ideas about the Primary and High School teaching they have experienced in the past is also challenged. Tabor lecturers plan for, and model, active learning methodologies. Interactive lectures produce superior educational outcomes and consequently high satisfaction in students. "Students who frequently encounter active learning in their courses perceive themselves as gaining knowledge and understanding. As a consequence, such students may be more likely to view their college experience as personally rewarding" ([71, p. 572]).

Tabor has developed a culture that focuses on active learning in an academic environment. Embedding relevant activities into lectures significantly improves student recall of information, and realizes the extensively recognized benefits of student engagement [66], [72]-[74].

G. Enriching Educational Experience

Table I indicates that Enriching Educational Experiences (EEE) indirectly influences OVL through the aspect of Career Readiness (CRE). It is, itself, partly a consequence of factors associated with Academic Challenge (AC) within a Supportive Learning Environment (SLE); aspects that have already been discussed in this paper. As such enriching educational experiences are like jigsaw pieces that combine to provide Education students with confidence to be a committed and passionate teacher. During their Initial Teacher Education (ITE), pre-service teachers develop a teaching identity that often changes as they respond to the experiences and activities in which they are engaged. Furlong [75] notes that there are many shifts within their 'teaching identities' and that this continues well into their teaching career. In a research study Rose [76] posits that these identities can be formed by educational experiences which include modelled teaching, direct instruction, and discussion of pre-service teaching experiences. This paper has shown, for example, Tabor's focus on forming a professional teacher identity alongside developing one's personal character because, as Palmer [64, p. 2] reminds us, "we teach who we are".

Tabor School of Education provides rich educational experiences within the requirements of current best practice and various key stakeholders, including government requirements of, for example, the Teacher Education Ministers Advisory and the Australian Institute for Teaching and School Leadership. Crosswell and Elliot [34] reflect a growing body of literature that supports the connection between teacher commitment and an inner experience of passion for teaching. An important part of the Tabor ITE process is to develop pre-service teachers' confidence and professional pride; encouraging them to retain and grow the passion for education that first led them to study teaching.

Marsh [77] ascertains that bland learning experiences may lead to dissociation, ambivalence or an absence of meaningful learning. In contrast, enriching educational experiences provide scaffolding for more complex conceptual and meaningful learning. Student satisfaction that comes from such learning experiences is a pivotal motivator for remaining in their course of study. Such satisfaction also contributes to the development of pre-service teacher confidence and passion, which could lead to highly effective graduate teachers.

VII. CONCLUSION

Student satisfaction is of paramount importance in any tertiary education context. Based on the factors used in the AUSSE study, the results reported in this paper have shown the various ways in which Overall Student Satisfaction (OVL) of Tabor School of Education students is influenced by the

interactions between four factors of direct influence, being Supportive Learning Environment (SLE), Work Integrated Learning (WIL), Career Readiness (CRE), and Academic Challenge (AC), and three factors of indirect but equal relevance, being Student and Staff Interactions (SSI), Active Learning (AL), and Enriching Educational Experiences (EEE). The resulting model (Fig. 1) has shown how important it is to identify and integrate effective processes in all seven factors in the tertiary education process to attain student satisfaction, as this holds significant bearing towards student retention (and perhaps future study and professional work success). However, due to the relatively small sample size used in this investigation, further examination of the interactions between the factors and how they influence overall student satisfaction is warranted. Employing other statistical procedures that are becoming more widely recognized due to their advantages over "traditional" ones, such as the Rasch Model [78], to examine these interactions is also warranted.

Still, the (2010, 2012, 2013) AUSSE data indicates that the Tabor School of Education provides all the right ingredients to make students feel very satisfied with their Initial Teacher Education tertiary course experience. In the recent 2015 Student Experience Survey National Report (see www.qilt.edu.au) conducted for the Government's Quality Indicators for Learning and Teaching, Tabor School of Education also obtained the highest rating (around 94%) among all participating universities and private tertiary institutions. That 2015 report data supports this paper's findings. Combined, they present an outline picture of Tabor School of Education's high quality support and teaching processes that engage its pre-service teaching students in what they rate as a highly satisfying course. In some ways, Tabor School of Education demonstrates a few characteristics of the Finnish Education System – widely known for their high quality of education. These include trust, flexibility and putting the wellbeing of students as a major priority, with both academic and administrative staff contributing to a supportive learning environment delivering appropriate content and a high standard of academic direction [79].

ACKNOWLEDGMENT

The academic staff team at Tabor School of Education would like to thank Petra Leitz and Ali Radloff (ACER) for provision of access to the AUSSE datasets for Tabor School of Education, and the guidance provided in the mining of those datasets.

REFERENCES

- [1] N. D. Aitken, "College student, performance, satisfaction and retention: specification and estimation of a structural model", *The Journal of Higher Education*, vol. 53, no. 1, pp. 32-50, Jan. – Feb. 1982.
- [2] B. A. Browne, D. O. Kaldenberg, W. G. Browne, and D. J. Brown, "Student as customer: factors affecting satisfaction and assessments of institutional quality", *Journal of Marketing for Higher Education*, vol. 8, no. 3, pp. 1-14, 1998.
- [3] K. M. Elliot, and M. A. Healy, "Key factors influencing student satisfaction related to recruitment and retention", *Journal of Marketing for Higher Education*, vol. 10, no. 4, pp. 1-11, 2001.

- [4] M. M. Navarro, M. P. Iglesias, and P. R. Torres, "A new management element for universities: satisfaction with the offered courses", *International Journal of Educational Management*, vol. 19, no. 6, pp. 505-526, 2005.
- [5] J. A. Douglas, A. Douglas, R. J. McClelland, and J. Davies, "Understanding student satisfaction and dissatisfaction: an interpretive study in the UK higher education context", *Studies in Higher Education*, vol. 40, no. 2, pp. 329-349, 2015.
- [6] J. Douglas, A. Douglas, and B. Barnes, "Measuring student satisfaction at a UK university", *Quality Assurance in Education*, vol. 14, no. 3, pp. 251-267, 2006.
- [7] K-L. Krauss, and H. Coates, "Students' engagement in first-year university", *Assessment & Evaluation in Higher Education*, vol. 33, no. 5, pp. 493-505, 2008.
- [8] ACER, *AUSSE 2013 Tabor Adelaide Executive Summary Report*. Melbourne, VIC: ACER, 2013.
- [9] ACER, *AUSSE 2010 Institution Report*. Melbourne, VIC: ACER, 2010.
- [10] ACER, "An overview of the psychometric properties of the AUSSE Student Engagement Questionnaire (SEQ)", *Research Briefing: Australasian Survey of Student Engagement*, vol. 7, pp. 1-14, 2011.
- [11] ACER, *AUSSE 2012 Institution Report*. Melbourne, VIC: ACER, 2012.
- [12] R. B. Kline, *Principles and Practice of Structural Equation Modeling*. New York: The Guilford Press, 1998.
- [13] IBM Corporation, *IBM SPSS*. New York: IBM Corporation, 2015.
- [14] K. G. Jöreskog and D. Sörbom, *LISREL 8.80 for Windows*. Lincolnwood, IL: Scientific Software International, Inc., 2006.
- [15] G. Rayner and T. Papakonstantinou, "Student perceptions of their workplace preparedness: making work-integrated learning more effective", *Asia-Pacific Journal of Cooperative Education*, vol. 16, no. 1, pp. 13-24, 2015.
- [16] L. M. Carter and A. Romero, "Work integrated learning and student satisfaction: a qualitative study in a business school" in *Proceedings of the Our University, Our Future: Celebrating Learning and Teaching 2013*, Macquarie University, New South Wales, 2014, pp. 19-24.
- [17] R. Whannell, "Predictors of attrition and achievement in a tertiary bridging program", *Australian Journal of Adult Learning*, vol. 53, no. 2, pp. 280-301, 2013.
- [18] G. McDonald, "Does size matter? The impact of student-staff ratios", *Journal of Higher Education Policy and Management*, vol. 35, no. 6, pp. 652 – 667, 2013.
- [19] D. Bradley, P. Noonan, H. Nugent and B. Scales, *Review of Australian higher education: Final Report*. Canberra, ACT: Department of Education, Employment and Workplace Relations, Commonwealth of Australia, 2008.
- [20] D. Mayer, A. Allard, R. Bates, M. Dixon, B. Doecke, A. Kostogriz, L. Rowan, B. Walker-Gibbs, S. White, J. Kline, et al., *Studying the Effectiveness of Teacher Education – Final Report*. Geelong, VIC: Deakin University, 2015.
- [21] F. Ben, "Students' uptake of physics: A study of South Australian and Filipino Physics students", unpublished.
- [22] J. Allen and C. Clarke, "Nurturing supportive learning environments in higher education through the teaching of study skills: To embed or not to embed?", *International Journal of Teaching and Learning in Higher Education*, vol. 19, no. 1, pp. 64-76, 2007.
- [23] I. Hussain, "A study of learners' reflection on andragogical skills of distance education tutors", *International Journal of Instruction*, vol. 6, no. 1, pp. 123-138, 2013.
- [24] K. A. Jones and J. L. Jones, "Making Cooperative Learning Work in the College Classroom: An Application of the 'Five Pillars' of Cooperative Learning to Post-Secondary Instruction", *The Journal of Effective Teaching*, vol. 8, no. 2, pp. 61-76, 2008.
- [25] S. Attle and B. Baker, "Cooperative Learning in a Competitive Environment: Classroom Applications", *International Journal of Teaching and Learning in Higher Education*, vol. 19, no. 1, pp. 77-83, 2007.
- [26] G. Scott, *University student engagement and satisfaction with learning and teaching*. University of Western Sydney: Review of Australian Higher Education, 2008.
- [27] R. B. Williams, *Cooperative Learning: A Standard for High Achievement*. Thousand Oaks, CA: Corwin Press, 2007.
- [28] C. M. Shields, *Bakhtin Primer*. New York, USA: Peter Lang Publishing, 2007.
- [29] J. Reeve, "How students create motivationally supportive learning environments for themselves: The concept of Agentive Engagement", *Journal of Educational Psychology*, vol. 105, no. 3, pp. 579-595, 2013.
- [30] D. W. Johnson, R. T. Johnson and K. A. Smith, *Active learning: Cooperation in the college classroom*. Edina, MN: Interaction, 1991.
- [31] Universities Australia, *Landmark strategy to make graduates more 'job ready'*, <https://www.universitiesaustralia.edu.au/news/media-releases/Landmark-strategy-to-make-graduates-more--job-ready-#V5b_SjEYsYQ>, 2013 (accessed 16 March 2016).
- [32] C. Morrison, "Purpose, practice and theory: Teacher educators' beliefs about Professional Experience", *Australian Journal of Teacher Education*, vol. 41, no.3, pp. 105-125, 2016.
- [33] R. Le Cornu, *Key components of effective professional experience in initial teacher education in Australia*. Melbourne, VIC: Australian Institute for Teaching and School Leadership, 2015.
- [34] C. Crosswell and D. Beutel, "A bridge over troubling waters: a snapshot of teacher graduates' perceptions of their ongoing professional learning needs", *Asia-Pacific Journal of Teacher Education*, vol. 41, no. 2, pp. 144-158, 2013.
- [35] Department of Education Science and Training, *An ethic of care: Effective programmes for beginning teachers*. Canberra, ACT: Commonwealth of Australia, 2002.
- [36] A. McCormack, J. Gore and K. Thomas, "Early career teacher professional learning", *Asia-Pacific Journal of Teacher Education*, vol. 34, no. 1, pp. 95–113, 2006.
- [37] E. R. Howe, "Exemplary teacher induction: An international review", *Educational Philosophy & Theory*, vol. 38, no. 3, pp. 287-297, 2006.
- [38] P. McKenzie, G. Rowley, P. Weldon and M. Murphy, *Staff in Australian Schools 2010: Main report on the survey*. Camberwell, VIC: Australian Council for Educational Research, 2011.
- [39] Department of Education, Employment and Workplace Relations, *Review of funding for schooling: Final report*. Canberra, ACT: Commonwealth of Australia, 2011.
- [40] M. Pietsch and J. Williamson, "'Getting the pieces together': Negotiating the transition from pre-service to in-service teacher", *Asia-Pacific Journal of Teacher Education*, vol. 38, no. 4, pp. 331-344, 2010.
- [41] J. Pearce and C. Morrison, "Teacher identity and early career resilience: Exploring the links", *Australian Journal of Teacher Education*, vol. 36, no. 1, pp. 48-59, 2011.
- [42] M. Pillen, D. Beijaard and P. den Brok, "Tensions in beginning teachers' professional identity development, accompanying feelings and coping strategies", *European Journal of Teacher Education*, vol. 36, no. 3, pp. 240-260, 2013.
- [43] R. Ewing and J. Manuel, "Retaining quality early career teachers in the profession: New teacher narratives", *Change: Transformations in Education*, vol. 8, no. 1, pp. 1-16, 2005.
- [44] R. Ewing and D. Smith, "Retaining quality beginning teachers in the profession", *English Teaching: Practice & Critique*, vol. 2, no. 1, pp. 15-32, 2003.
- [45] M. Huberman, "On teachers' careers: Once over lightly, with a broad brush", *International Journal of Educational Research*, vol. 13, no. 4, pp. 347-362, 1989.
- [46] House of Representatives Standing Committee on Education and Vocational Training, *Top of the class: Report on the inquiry into teacher education*. Canberra, ACT: Commonwealth of Australia, 2007.
- [47] D. Bloomfield, "Emotions and getting by: A pre-service teacher navigating professional experience", *Asia-Pacific Journal of Teacher Education*, vol. 38, no. 3, pp. 221-234, 2010.
- [48] D. Rorrison, *Jumping through spinning hoop: Stories of the middle school and secondary practicum*. South Melbourne, VIC: Cengage Learning Australia, 2008.
- [49] J. Abbott-Chapman, "Let's keep our beginning teachers!", *Principal Matters: the official journal of the Secondary Principals' Associations of Australia*, pp. 2-4, Dec.- Feb. 2005.
- [50] C. Rosas and M. West, "Pre-Service Teachers' Perception and Beliefs of Readiness to Teach Mathematics", *Current Issues in Education*, vol. 14, no. 1, pp. 1-23, 2011.
- [51] L. Soccorsi, "Instilling a personal teaching philosophy in pre-service teachers: Vitally important but not always easy to achieve", *Journal of Student Engagement: Education Matters*, vol. 3, no. 1, pp. 21-28, 2013.
- [52] S. Billett, "Learning throughout working life: A relational interdependence between social and individual agency", *British Journal of Education Studies*, vol. 55, no. 1, pp. 39–58, 2008.
- [53] J. H. Peters "Are They Ready? Final Year Pre-service Teachers' Learning about Managing Student Behaviour", *Australian Journal of Teacher Education*, vol. 37, no. 9, pp. 18-42, 2012.

- [54] H. Huntly, "Teachers' work: beginning teachers' conceptions of competence", *Australian Educational Researcher*, vol. 35, no. 1, pp. 125-145, 2008.
- [55] S. L. Payne, K. L. M. Kleine, J. Purcell and G. R. Carter, "Evaluating Academic Challenge beyond the NSSE", *Innovative Higher Education*, vol. 30, no. 2, pp. 129-146, 2005.
- [56] K. Noble and R. Henderson, "The Promotion of "Character" and its Relationship to Retention in Higher Education", *Australian Journal of Teacher Education*, vol. 36, no. 3, pp. 24-36, 2011.
- [57] S. Richardson, *Uniting Teachers and learners: Critical insights into the importance of staff-student interactions in Australian university education*. Melbourne: ACER, 2011.
- [58] K. Young and L. Sax, "Student-faculty interaction in research universities: differences by student gender, race, social class, and first-generation status", *Research in Higher Education*, vol. 50, no. 5, pp. 437-459, 2009.
- [59] V. Tinto, "Colleges as communities: Taking research on student persistence seriously", *The Review of Higher Education*, vol. 21, no. 2, pp. 167-177, 1998.
- [60] M. Meeuwisse, S. Severiens and M. Born, "Learning Environment, Interaction, Sense of Belonging and Study Success in Ethnically Diverse Student Groups", *Research in Higher Education*, vol. 51, no. 6, pp. 528-545, 2010.
- [61] K. Robinson and L. Aronica, *Creative Schools. Revolutionizing Education from the Ground Up*. Australia: Allen Lane (Penguin Group), 2015.
- [62] S. Kagan, "Teaching for character and community", *Educational Leadership*, vol. 59, no. 2, pp. 50-55, 2001.
- [63] T. Lovat and R. Toomey, *Values education and quality teaching: The double helix effect*. Sydney: David Barlow Publishing, 2007.
- [64] P. J. Palmer, *The courage to teach: Exploring the inner landscape of a teacher's life*, 10th Anniversary Ed. San Francisco: Jossey Bass, 2007.
- [65] S. Donnison and D. Edwards, "Understanding the Link between Student Values and Transition", *The International Journal of Learning*, vol. 17, no. 2, pp. 417-427, 2010.
- [66] M. Prince, "Does active learning work? A review of research", *Journal of Engineering Education*, vol. 93, no. 3, pp. 223-231, 2004.
- [67] I. P. Ball and C. Perry, "Differences in student engagement: Investigating the role of dominant cognitive processes preferred by Engineering and Education students", *Education Research International*, vol. 2011, pp. 1-8, 2011.
- [68] ACER, "Beyond happiness: Managing engagement to enhance satisfaction and grades", *Research Briefing: Australasian Survey of Student Engagement*, vol. 1, 1-8, 2008.
- [69] C. J. Bonwell, *Active learning: Creating Excitement in the classroom*. Washington DC, USA: ERIC Clearing House on Higher Education, 1991.
- [70] B. J. Millis, *Active learning strategies in face to face courses*, <http://ideaedu.org/wp-content/uploads/2014/11/paperidea_53.pdf>, 2012 (accessed 18 March 2016).
- [71] J. M. Braxton, J. F. Milem, and A. S. Sullivan, "The influence of Active Learning on the college student departure process: toward a revision of Tinto's theory", *The Journal of Higher Education*, vol. 71, no. 5, pp. 569-590, 2000.
- [72] C-M. Zhao and G. D. Kuh, "Adding value: learning communities and student engagement", *Research in Higher Education*, vol. 45, no. 2, pp. 115-138, 2004.
- [73] R. M. Carini, G. D. Kuh and S. P. Klein, "Student engagement and student learning: testing the linkages", *Research in Higher Education*, vol. 47, no. 1, pp. 1-32, 2006.
- [74] E. Pawson, M. Healey and M. Solem, "Reflecting on student engagement", in *Active Learning and Student Engagement: International Perspectives and Practices in Geography in Higher Education*, M. Healy, E. Pawson and M. Solem, Eds. New York: Taylor and Francis, 2010, pp. 208-212.
- [75] C. Furlong, "The teacher I wish to be: exploring the influence of life histories on student teacher idealised identities", *European Journal of Teacher Education*, vol. 36, no. 1, pp. 68-83, 2013.
- [76] S. Rose, *How Do Teacher Preparation Programs Promote Desired Dispositions in Candidates?*, <<http://sgo.sagepub.com>>, Jan.-Mar. 2013 (accessed 1 April 2016).
- [77] C. Marsh, *Becoming a Teacher: Knowledge, Skills and Issues*, 5th ed. French's Forest, NSW: Pearson Education Australia, 2015.
- [78] G. Rasch, *Probabilistic models for some intelligence and attainment tests*. Copenhagen, Chicago: Danmarks Pædagogiske Institut, University of Chicago Press, 1980.
- [79] T. Stehlik, *Finland – where 'equality starts at the blackboard'*, <www.teachermagazine.com.au>, May 2016 (accessed 11 May 2016).