

Transformation in higher education: a learner–needs segmentation leads to improved learner satisfaction

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Segmentation is a marketing concept that can be applied in a post-secondary context. This article delineates the outcome of applying a learner–needs segmentation that resulted in significantly improved learner satisfaction scores in a professional faculty at a large public university. Our original work described the purpose and value of learner–needs segmentation to enable a better understanding of the undergraduates at a larger urban university. This article describes how a single faculty implemented a learner–needs segmentation to underpin curriculum redesign, program realignment and services to its students.

Introduction

Segmentation is a marketing concept that can be applied in a post-secondary context. This article delineates the outcome of applying a learner–needs segmentation that resulted in significantly improved learner satisfaction scores in a professional faculty at a large public university. Our original work (Rogers *et al.*, 2001) described the purpose and value of learner–needs segmentation to enable a better understanding of the undergraduates at a larger urban university. This article describes how a single faculty implemented a learner–needs segmentation to underpin curriculum redesign, program realignment and services to its students.

Segmentation organizes a large group (in this case, approximately 450 undergraduate students) into clusters according to their current and evolving self-identified needs and motivations for attending university. This concept underlies the current understanding of the most effective approach to student learning (Tagg, 2004; Pascarella & Terenzini, 2005). Specifically, instead of requiring students to simply accumulate credits toward a degree, the emphasis is on the organization and alignment of the resources and information with the needs, backgrounds and preferences of *learners*. The reason why segmentation is important and timely is that universities are currently struggling with how to best serve their learners in the face of declining financial resources, increased calls for accountability by Government,

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increasing competition among institutions and more discerning students, particularly those referred to as the ‘millennials’ (Howe & Strauss, 2000). In the case of this particular faculty, students had rated their learner satisfaction lower than any other faculty in the university, applications for admission to the faculty were declining and negative consequences for the faculty, such as a reduced resource allocation, were imminent. In response to these issues, a learner–needs segmentation was undertaken by the senior administration of the faculty. This analysis led to staff development and education as well, and shifts in the attitudes of individual faculty members toward different types of learners, creation of curriculum streams, and redesign of support services. The article concludes with a discussion of the implications for university administrators, faculty educators and curriculum planners.

Purpose of segmentation

Segmentation is one way of focusing a university, or a specific faculty, to serve its learners better. The premise behind this thinking is that while some learners share similar characteristics (such as gender, age or grade point average) not all students with similar characteristics have the same *needs*, and those with similar *needs* can be grouped, yielding definable ‘segments’. Faculty and staff begin to understand learners in new ways which stimulates creative responses to curricula, educational strategies, and student services.

Most post-secondary institutions segment their learners in traditional ways based on demographic characteristics such as age, year of program, gender, etc, and organize their programs and services accordingly. However, this method of classifying students, while expedient, may not be sufficient for designing programs and services as it makes assumptions about students based on simplistic, quantitative attributes. Most recent literature (Tagg, 2004; Pascarella & Terenzini, 2005) emphasizes the importance of attention to the qualitative aspects of learning which are more connected to the interactions between learner needs and preferences and the curriculum in the achievement of effective learning outcomes. It could be argued that this attention to outcomes is particularly important for students in a professional faculty where the development of competencies and values are critical underpinnings of practice. In addition, today’s students are increasingly knowledgeable and demanding consumers who are less willing to accept declining program and service quality at higher and higher costs (Howe & Strauss, 2000).

In order to think and act more strategically, a needs-based segmentation allows educators to understand the groups of learners it currently serves, should serve and can best serve based upon their current and evolving needs, backgrounds and expectations. Segmentation based on these student-based needs and preferences guides the design and development of programs, services and processes to meet targeted needs. Once a faculty has segmented its learners, there is an opportunity to streamline and redesign or partner with others to meet unmet needs or to divest itself of those programs or services that are better delivered by others or beyond the

mandate of the faculty. Given that segmentation enables an organization to recognize who it can best serve and should serve more specifically, the faculty can then monitor the evolving nature of the various segments and make informed decisions. The act of dividing student learners into distinct pedagogical segments allows a faculty to selectively develop programs, tailor services and communicate specific messages to targeted groups of learners in order to maximize their learning outcomes and educational experiences. Thus, in the face of declining financial resources and increasing demand for quality, a student needs-based segmentation can be an effective and efficient basis upon which realignment and positioning decisions can be made.

For example, learners who are in the workplace during the day require that their educational programs and services be delivered on evenings and weekends, while others may seek a day-time program with or without a full campus life. These varying needs necessitate a differential response by educators, administrative staff and faculty members. One size of education and learning experience does not fit all. Focused and differentiated institutions recognize and respond to the evolving needs of their selected student segments (Yeager *et al.*, 1997).

Context for change

The particular faculty described in this article offers undergraduate, graduate and doctoral degrees. The total student body in the faculty is approximately 700 supported by 40 faculty and 15 staff. It is one of 15 faculties in a large urban research university of approximately 28,000 students. The undergraduate professional program for 450 students is offered at multiple off-campus locations across the province.

Prior to the segmentation, there was a single curriculum for *all* undergraduate students in this professional program. The professional curriculum is referred to as a 'two-plus-two': two years of liberal arts followed by two years of professional studies. Students enter the program in their third year from one of three backgrounds: two years of university studies, a two-year college diploma in the professional area, or a general BA degree. The learner-needs segmentation revealed that the curriculum model which had been in place historically, as well as all of the all program materials and advising services, designed for the *smallest* segment of learners the faculty served. Therefore, the *majority* of the students in the faculty felt marginalized by the approaches and attitudes of faculty and staff in their program as they had to ignore and minimize their own interests and preferences to fit the existing instruction model and approach. This was understood to be one possible explanation of the low satisfaction of students with their educational experience in the faculty.

The satisfaction ratings referred to in this article are based on a provincial government survey conducted on recently graduated students and required of all post-secondary institutions in the province. The surveys are completed every two years. Data were collected from students who graduated in 1999, 2001 and 2003.

The survey asked many questions, however, four key questions were used as ‘key performance indicators’ (or KPIs) by the university to make budget allocation and other decisions. These four questions were also used by this professional faculty to track student outcomes and experiences over time. The questions were:

1. To what extent were you satisfied with the overall quality of your educational experience?
2. To what extent were you satisfied with the quality of teaching in your program?
3. To what extent were you satisfied with the relevance of your courses?
4. Would you choose the same program of study again?

In 1999, this professional faculty scored 54% on overall educational quality compared to 70%, 71%, 76%, 77% and 81% for other undergraduate professional faculties, respectively; and 70%, 72%, 73%, 78% and 84% for the non-professional (e.g., undergraduate arts and sciences) faculties, respectively. In terms of teaching quality, this faculty scored 51% compared to 60%, 67%, 70%, 71%, and 71% in other undergraduate professional faculties; and 66%, 71%, 73%, 77% and 79% in non-professional undergraduate faculties, respectively. In terms of course relevance, this faculty scored 52% while other undergraduate professional faculties scored 51%, 59%, 69%, 70%, and 71%, respectively; and 47%, 61%, 68%, 73% and 77% for non-professional undergraduate faculties, respectively. Similarly, this faculty scored 49% on choosing the same program, while other undergraduate professional faculties scored 71%, 77%, 77%, 78% and 78%, respectively; and, 65%, 67%, 71%, 73%, 74% and 75% for non-professional undergraduate faculties, respectively. These data portrayed a faculty at or near the bottom on each of these indicators (Alberta Universities Student Satisfaction Survey, 1999, 2001; Graduating Student Survey, 2003).

With the appointment of a new dean in 1998, the faculty recognized an opportunity to rethink their student ratings and do things differently. With the help of external facilitation, the faculty undertook a comprehensive self-examination that included input from students, faculty, staff, and community and professional stakeholders. The resulting strategic plan encompassed an environmental scan, student surveys and focus groups, and a SWOT (strengths, weaknesses, opportunities and threats) analysis. The faculty agreed to meet regularly and frequently, something it never used to do, to jointly build a fact-based understanding and co-create solutions to its many problems, some of which were evidenced by the survey results.

Internally, the faculty was facing significant struggles:

- dealing with the competing needs of various learner segments: the university transfer students, the after-degrees and the diploma holders;
- the difficulties encountered in trying to have curriculum conversations and discern what is core content so that courses can be properly sequenced and related to each other both vertically and horizontally within the program of study;
- the tough choices faced in delivering programs across the province—in wanting to be all things to all people in all places with limited resources;

- the challenges faced in trying to reward excellence in teaching as well as research, in trying to foster and promote collaboration as well as respect individual effort;
- the energy it takes to build a sense of community and pride and to communicate this with enthusiasm to the various ‘publics’; and
- the diligence needed to safeguard the agreed upon principals of equity, transparency and accountability especially in such potentially explosive areas as defining workloads and determining merit.

This honest self-reflection highlighted that the faculty was internally focused, hierarchical, lacking in trust, fractionalized, stuck with unresolved conflict, bureaucratic, fixated over past power struggles and managed by crises. In this environment, curriculum change was impeded and students were a secondary focus. Once these issues were surfaced, the faculty realized it had to overcome and transcend its legacy if it were to reach peak performance.

The first step in this transformation was for the faculty to gain consensus on the characteristics of its desired future state. This included a decision to become *learner-centred*; using a *team approach* to research and curriculum; being proactive, planful, participatory and timely in decision-making; and being transparent and accountable at all levels of the organization. To take the next step, the faculty undertook a learner-needs segmentation as a precursor to curriculum redesign, marketing and communications plan, and service redesign.

Steps in the segmentation process

Objectives

Two objectives were identified:

1. To reverse declining student satisfaction (no longer be at the bottom of the university’s biannual satisfaction rankings).
2. To increase the pool of students applying to the faculty.

Process overview

1. Reviewed in detail survey results from the 1999 Alberta Universities Student Satisfaction Survey and identified and analysed those responses that most impacted the standing of the faculty, as well as describing the experience of the faculty by students:
 - Those responses to questions that were key performance indicators for the university.
 - Those responses that were most relevant to the needs of the faculty’s students.
 - Those questions and responses that related to programs and services specifically within the jurisdiction of the faculty.
2. A small task team that included current students, faculty and staff from the faculty developed a draft ‘learner-needs segmentation’ model. This model was

then presented to the full faculty for discussion and further development. It included an articulation of needs *common to all learner segments* as well as *distinguishing needs for each segment*.

3. Focus group questions were designed to gather information pertaining to the underlying causes of student dissatisfaction (that is, unmet needs) and to validate the clusters of needs by segment. A moderator's guide incorporating these questions was developed and approved by faculty prior to initiating the focus group sessions. These questions focused on:
 - Identifying the needs of learners that went *unmet* for those who graduated from the faculty in May 1999.
 - Exploring common and unique needs of learners.
 - Soliciting suggestions for improving the *content and delivery of the program* (particularly in the immediate and short term) from these graduates.
4. A total of four focus group sessions, of 10 to 12 graduating students each, were held in locations across the province. The recruitment process for focus group members attempted to achieve a balance between participants who had entered the faculty from within the university and those who had first attended other post-secondary institutions and were transferring into the university. Wherever possible, the process attempted to recruit a blend of males and females, ages and ethnicities. Potential participants were informed that the faculty was undertaking this work in the context of the Student Satisfaction Survey results and was looking for feedback and guidance on what it could do to better meet learner needs. Participants were guaranteed anonymity.
5. Focus group information was analysed and a high-level summary of the needs and issues that were identified by the focus groups was prepared. A faculty student 'profile' was then developed based upon education and experience prior to entry into the faculty. It became clear from the focus groups that each category of students, or each 'segment' of the student population has specific, and sometimes unique, needs.
6. These learner segment profiles were then presented to *current* students registered in the faculty to determine if they identified with any or all of the same needs and issues noted by the focus group participants. Once verified, these needs-based 'segments' became the basis upon which curriculum, student services, teaching methods and attitudes were changed.

Results

Defining learner segments based on differentiated needs

Prior to the study, the faculty offered one form of the curriculum for all its learners, despite serving several distinct types or segments of learners. New thinking emerged as a result of the segmentation analysis process regarding how learners are admitted to the faculty and how these learners and their needs can be subdivided according to geography and other demographics.

1. *Admissions-based segmentation.*
 - a. *After degree learners.* After degree learners tended to be more mature, technology savvy and have made a conscious choice to pursue a career in the profession after having spent some time in the work force. They tended to have high expectations as they are anticipating Year 5. They wanted specialization yet need socialization into the profession along with the foundation knowledge and skills for professional practice. Most would prefer to receive a masters-level degree. Prior to changing the curriculum to meet their needs, they were admitted into Year 3 of the undergraduate professional program.
 - b. *Diploma learners.* Diploma learners had a technical base knowledge that is rooted in a practical, hands-on approach to the field. They inaccurately perceived that they are ready for advanced courses because they have well-developed skills, yet they were missing the depth and breadth of a liberal arts education and the socialization to university that would have been characteristic of a two-year college experience. This segment of students needs to learn to integrate theory with their practice; they need to learn to think critically and analytically about what they read, do and observe in practice while also keeping their practice skills current.
 - c. *University entrance learners.* University entrance learners tended to be younger and have less practical experience than other students entering the faculty. They had lower expectations than the other two segments of learners regarding the type of teaching and curriculum they needed. The original undergraduate program was designed for this segment; consequently, they tended to be the students who had expressed the most satisfaction with their learning experience, indicating that, for the most part, their needs and expectations of their program of studies were met.
 - d. *Post-degree continuous learners.* Post-degree continuous learners tended to be those who were already working in the profession and needed specific courses to meet specialized workplace demands. They tended to be older learners with more practical work experience. These learners need programs to be relevant, current (i.e., latest thinking in the field), and have direct applicability in their work environment.
2. *Sub-segments of learners.* Two specific sub-segments of learners were also identified which span all four admissions-based segments. These two segments of learners are those students who lived in rural settings and aboriginal learners. Due to their particular life experiences and circumstances, these learner segments were identified as having additional needs and characteristics uniquely their own, as well as the needs identified for their particular admission status.
 - a. *Learners in rural settings.* This segment of learners had additional needs requiring highly 'flexible' (i.e., less rigid schedule-wise) learning opportunities and community-based program delivery. They are typically employed full-time and need to remain firmly rooted in their communities.

They may have already received a general BA or hold a two-year diploma, but given their work experience, their needs are more aligned with the diploma learners. Their curriculum needs to make a clear link between practical application and theory. To them, curriculum needs to be directly relevant to their experience and local context.

- b. *Aboriginal learners.* Two types of aboriginal learners were identified in this study:
- Those seeking specific ('pure') aboriginal curriculum/programs that they can apply to their own people and in their own settings.
 - Those seeking greater flexibility to acquire knowledge in the profession that they can apply to their own people, as well as to others.

Faculty response to needs-based segmentation

Several faculty meetings, chaired by the dean and assisted by the external facilitator, were held to discuss the results of the focus groups and the segmentation analysis and to develop strategies and priorities for improvement. The professional faculty responded positively to the learner needs segmentation and developed a strategic plan that encompassed multiple levels of action: administrative structure and service realignment, curriculum redesign, communications, student engagement, and attitude towards students. The planning process also made a commitment to an ongoing evaluation and student experience analysis.

A new leadership structure was put in place to more clearly align the faculty's activities with their identified priority areas. For the first time in the history of the faculty, three associate dean portfolios were created: associate dean, students; associate dean, teaching and learning; and associate dean, research and partnerships. This structure replaced a more traditional model with a single associate dean, and program coordinators for undergraduate and graduate studies with the graduate coordinator also holding the research portfolio. Student needs and student voice now had a clearly identified champion embedded within the faculty structure. Under this new structure, student service staff identified several processes and policies that needed to be redesigned to better meet student needs in all learner segments, including admissions, registration, advising and issues management. For example, coordinated and complementary services for the faculty's students from recruitment through to career advice and continuing professional development were developed or enhanced with the assistance and support of the university's student affairs departments.

The associate dean, teaching and learning, led the curriculum redesign process through multiple faculty teams. Students and practitioners from the professional community were included in all discussion and working groups. As a result, *three* undergraduate curriculum routes and *two* graduate level routes were created—all emanating from the segmentation analysis described earlier. The three undergraduate routes were designed to meet the needs of diploma learners, university transfer learners and rural/aboriginal learners. The graduate routes were designed to

meet the needs of after-degree learners (i.e., BA holders) and post-degree learners (i.e., holders of the professional undergraduate degree). The faculty's curriculum redesign encompassed the sequence, organization and content of courses, and teaching strategies and techniques. Teaching assignment adjustments were deliberately made to try to give first semester students a better introduction to the faculty.

A comprehensive communications plan was then developed which promoted an updated image and the reputation of the faculty and this plan was embraced by the whole faculty- students, staff and faculty. It created a common 'look and feel' that permeated both print and web, and established key messages targeted specifically for students, funders and partners. The faculty's 30-year history was documented to generate a sense of pride, accomplishment and roots which visibly manifested itself in the corridors of the faculty.

Through the work of the associate dean (students) and the student affairs committee, structures and policies were put in place to ensure student voice and inclusion. Efforts were made to enhance student orientations, include student representation on every committee, to build a sense of connection, pride and community. The student lounge was renovated and expanded, and day lockers were added. The dean introduced monthly lunches with small groups of students to solicit views and experiences from a cross-section of students. These meetings also assisted her to validate and monitor the segmentation analyses completed earlier. In addition, several student awards were created to acknowledge excellence in areas relevant to the profession (e.g., student leadership, personal achievement, field practicum) to complement the existing faculty awards which only recognized academic excellence.

Although it took two full years to change and implement the new curriculum, changing the attitude and approach of faculty members and staff towards the faculty's students occurred almost immediately. Faculty felt better equipped to identify or to validate the differing needs of students in their classes, becoming more patient with some and more challenging with others. Staff could better recognize the unmet needs of students and creatively respond. For example, a student who was previously regarded as 'whiny and incapable of doing anything for themselves' was now recognized as a diploma holder used to a community college hand-holding environment. Although the presenting issue 'looked' the same, the staff response was much different. Furthermore, the shift in attitude by faculty and staff included a commitment to deepen their collective understanding of students and their current and evolving needs.

Learner response to needs-based segmentation

Four years after the initial student satisfaction survey, the data which precipitated the original segmentation analysis continue their upward trend. KPI Survey results both two years and four years later indicated a *substantial* increase by the students from the previous results in the key categories: students' assessment of the overall quality of their educational experience increased from 54% in 1999, to 64% in 2001, to 72% in 2003; satisfaction with teaching quality in their program increased from

51% in 1999, to 71% in 2001, to 73% in 2003; and, satisfaction with course relevance increased from 52% in 1999, to 75% in 2001, to 78% in 2003. In particular it is worth noting the *significant* increase in students' positive response to the question: If you could choose again, would you choose the same program of study? When this question was first asked in 1999, the professional faculty scored 49%, by far the lowest in the entire university. The most recent response to this question is that 91% of respondents would choose the same program, which is 12% higher than the average for all undergraduate faculties, and 15% higher than the average for the professional faculties (Patterson, 2004).

When particular aspects of the teaching and learning experience were further analysed, the most recent survey results of all 14 key performance indicators shows an increase of 9% to 26%. The greatest increases were seen in the following indicators: teachers provided helpful comments and feedback (+26%); teachers showed concern for students' progress (+21%); Instructors provided interesting presentations (+21%); most instructors were effective (+20%); and course objectives were clearly communicated (+19%). When compared to the average for all undergraduate faculties, the professional faculty in question was *above average* in all but one of the 14 indicators. This professional faculty scored well above the overall university average in the following indicators: teachers showed concern for students' progress (at 70%, 14% above the average, and 18% higher than the average for undergraduate professional faculties); teachers offered to help students with problems (at 83%, 8% above the university average); most instructors were effective (at 77%, 8% higher than the average); and student work was graded promptly (at 85%, 18% above the average, and 16% above the average for the undergraduate professional faculties).

Further evidence of students' growing satisfaction with their faculty and learning experience is their increasing collective engagement in the life of the faculty and interest in its growing reputation. The student-based faculty organization flourished in this environment and became sponsors and creators of several initiatives, such as a career fair with local organizations, and cross-faculty student linkages on common issues. There was also a growing pool of students willing to participate on committees and working groups within the faculty.

Institutional response to needs-based segmentation

At the presidential and provost levels, this professional faculty has been held up as a specific example for how to turn a faculty around. Learner needs segmentation has been identified as the starting point for the metamorphosis and the most recent Student Satisfaction Survey results as the tangible outcome of this strategic view and understanding of students. The faculty has also been rewarded through increases in the budget and position reallocation processes. The dean's leadership has been recognized through her reappointment and the invitation from the president to chair Deans' Council.

Future challenges

Learner needs segmentation data are time-sensitive and need to be reviewed about every three to five years to ensure the information reflects the environment in which a faculty is making strategic decisions. From this deeper understanding of current and evolving student needs, a faculty may decide to continue to serve its core student segments while deliberately growing a particular segment (through aggressive recruitment) and/or investing in an emerging learner segment (by undertaking additional market research). Further research is required to examine how student needs evolve or develop over the course of their program, and the role a faculty plays in influencing those changes.

Knowing undergraduate students based on their needs is a powerful strategy that can mobilize a faculty to transform. It provides a point of convergence for faculty members, student service providers and planners. It is the strategic realignment of curriculum, services, governance, attitude, and communications targeted to those learner segments that a faculty, or indeed an entire institution, can best serve that ultimately impacts the quality of the student experience and leads to improved learner satisfaction. It also improves faculty and staff morale and pride and the reputation of the faculty—factors which also increase student satisfaction with their experience.

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