

Critical Success Attributes of Transnational IT Education Programmes: The Client Perspective

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Executive Summary

How can transnational education (TNE) programs be made more effective? According to the literature, no one is in a better position to comment on this question than the students themselves. At the same time, there is a recognized scarcity in the literature of student input into the issue of transnational program effectiveness. In consideration of this need, a research study was conducted to examine the effectiveness of TNE programs from the student perspective. To this end, transnational students' views on the various dimensions of the TNE context were used as a key indicator of the effectiveness of transnational programs. The evaluated dimensions included student, instructor, curriculum and instruction design, interaction, evaluation and assessment, technology, and program management, and organisational support. Data for the study was collected from approximately five hundred transnational students participating in eight transnational undergraduate computing programs offered by four Australian universities in Hong Kong, Malaysia, Singapore and Vietnam.

Overall, students from the eight different programs considered in this study were in agreement as to the factors they perceived as most important to the effectiveness of transnational programs. As anticipated and confirmed by the literature, students were of the view that their own motivation, self-discipline, and the ability to work independently, as well as in a team, was a pre-condition of an effective program. With respect to instructors, students attached the greatest importance to the instructors' ability to understand program requirements and student needs, use communication skills effectively, and be well prepared and organized. They were also in agreement regarding the importance of instructors' experience with technology-based programs and their ability to provide well-designed syllabus and presentation outlines. The relevance of the curriculum to job and career was perceived as the most important aspect of program curriculum and instruction design. The alignment of assessment with learning objectives was also considered important, as was assessment of student attitudes and levels of satisfaction. Students identified two aspects of importance in relation to technology: availability and reliability, and the ease of use of technology. With respect to program management and organizational support, timely preparation of program materials was considered important, as was the institution's attention to the high quality of the program.

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The findings of the reported study indicate that to improve and sustain transnational programs in the future, it is essential for universities to gain an understanding of the learners' perspective. The findings provide a framework to assist in making informed decisions in the design, development, and review of transnational programs.

Keywords: instruction, learning environment, program attributes, program effectiveness, student perspectives, transnational education.

Introduction

While there may be many definitions of transnational education, the one used in this article describes that type of education, often referred to as offshore education, *in which the learners are located in a country different from the one where the awarding institution is based* (UNESCO & the Council of Europe, 2001). This definition includes education that is provided by collaborative arrangements, such as franchising, twinning, joint degrees where study programs are provided by another partner, as well as non-collaborative arrangements such as branch campuses, offshore institutions, and corporate universities. The Australian Department of Education Science and Training (DEST) (2005) provides a definition of *Australian Transnational Education*; this definition includes two additional requirements:

- (1) that the transnational program be delivered and/or assessed by an accredited Australian provider; and
- (2) that the delivery includes a face-to-face component.

It further stresses that, in contrast to distance education provided in purely distance mode, transnational education includes a physical presence of instructors offshore either directly by the Australian provider or indirectly through a formal agreement with a local institution.

The demand for transnational higher education in Asian countries (excluding China) is estimated to reach nearly 500,000 students by 2020 (Organisation for Economic Cooperation and Development [OECD], 2009). For Australian universities, who are key transnational providers in the region (Banks, Kevat, Ziguras, Ciccarelli, & Clayton, 2010; Universities Australia, 2009), ensuring high quality and effectiveness of Australian transnational offerings and satisfying the needs of the highest demand disciplines in the region – computing and business – is of vital importance.

Equally important is the need to accommodate the growing interest in the experiences of the participating transnational students. A leading international strategic information provider, The Observatory on Borderless Higher Education (OBHE), identified “*student perspectives from those participating in transnational higher education programmes*” as a strategic topic for its reports. In consideration of this dual need, the research study reported in this article sought to investigate the issue of transnational program effectiveness from the student perspective. The study aimed to provide feedback (from student perspective) to the question of how transnational education programs could be made more effective. The finding of the study could be pertinent to staff involved in the design, development, and review of transnational programs, as well as to university administrators responsible for making strategic decisions.

Effectiveness of Transnational Programs

This section focuses on the issue of effectiveness of transnational education programs. The section reviews the definition of effectiveness in transnational context, as well as determinants of program effectiveness.

Definition and Perspectives

A transnational education program is perceived to be effective if it fulfils the needs of its participants to such an extent that they would be happy to enrol in another similarly designed program. The needs of the learners represent individually and socially defined goals that can be achieved in a variety of ways and relate to a number of learning outcomes. Although the ultimate objective of a program is to enable the learners to achieve their goals, the assessment of its effectiveness in-

variably involves evaluation of factors at two levels of operation: the individual level and the system level. At the individual level, the learning experience, the practical relevance of acquired skills, and the satisfaction with the learning experience are evaluated. At the system level, the evaluation includes the functional, managerial, and instructional aspects. Whilst student retention and/or repeat enrolments are critical indicators of program effectiveness, Rovai and Downey (2010) have identified planning, marketing and recruitment, financial management, quality assurance, teacher development, and course design and pedagogy as being equally important.

Students perceive a program to be effective if they pass examinations, feel that the content of the program is relevant to their needs, have an opportunity to network with other students, feel part of the class and connected to teachers, have opportunities for participation, receive support when needed, experience few technical problems, and feel comfortable with the technology (Beard & Harper, 2003; Kenny, 2003; Simonson, Smaldino, Albright, & Zvacek, 2000). Teachers perceive a program to be effective if students are motivated, complete assessment tasks and participate in discussion, use the technology to communicate, pass examinations, and few students drop out from the program. Teachers also perceive the program to be effective if the program content meets the students' needs and if the institution provides financial, personnel and technical support.

From the perspective of program developers, effective programs are designed to meet diverse needs of students. Students in TNE programs represent a wide variety of backgrounds, experiences, and needs which make it impossible to identify the *typical* distance student; therefore, an effective program has to cater for varied student profiles. Schonfeld (2005) suggested that standardized program content and student ability to re-visit course material can help overcome this problem. Others have stressed the need to provide for strong personal connections between students and between students and teachers as well as the use of visual media wherever possible, reliable two-way channels of communication, and clearly defined parameters around technical issues and course assessments (Lei & Gupta, 2010; Reeder, 2010). The effectiveness of a program can be further enhanced if developers understand and apply learning theories to its development and delivery.

From an educational perspective, an effective program should support the universal principles for good practice in education. It should encourage and maximise contacts between students and teachers, develop relationships and promote collaboration among students, incorporate active learning, give rich and rapid feedback to students, stress time-on-task, set high standards for students' performance, and respect individual differences and allow students opportunities for learning that acknowledge those differences (Chickering & Ehrmann, 1996; Chickering & Gamson, 1987; McLoughlin, Oliver & Wood 1999). In other words, it is essential that programs delivered at a distance enable students to 'fit in'.

Determinants

Phipps & Merisotis (2000), following a review of program quality measures used by leading distance education institutions, identified seven categories considered essential to ensuring excellence in distance education, especially Internet-based. The categories include: institutional support, course development, teaching/learning, course structure, student support, staff support, and evaluation and assessment. For Kennedy and Duffy (2004, p. 203), "collaboration between...key participants: administrators, teachers, technical support staff, librarians and students" is the key to successful and effective programs.

The amount of interaction/collaboration in a program appears to be an important element of its effectiveness (Kennedy & Duffy, 2004). Interaction can be defined as "an interplay and exchange in which individuals and groups influence each other" (Rovai & Barnum, 2003, p. 59). Moore

(1990) pointed to the content of the interaction between teacher and student and the quality of the communication system facilitating this interaction as determinants of successful distance education. Morgan & McKenzie (2003) stressed the critical importance of interaction between participants in the distance education environment and regard it as one of the determinants of effectiveness; Palloff & Pratt (2003) further emphasized the importance of carefully designed and well conducted Web-based interaction. Other studies have focused on specific characteristics in distance education including student satisfaction (M. Allen, Bourhis, Burrell, & Mabry, 2002); instructional features affecting student achievement (Machtmes & Asher, 2000); and education technologies in learning (Cavanaugh, 2001; Palloff & Pratt, 2003). The extent to which online delivery of course content has become a factor in TNE now means that student satisfaction with Web-supported programs is likely to determine whether the student will enrol in future programs in this format or with the same education provider (McGorry, 2003; I. E. Allen & Seaman, 2004).

Since transnational education is a fusion of education and technology to deliver instructions effectively to students at a distance, the key to an effective distance education program is the effectiveness of the individual components and the flexibility of the interface between them. Some educators argue that the lack of interaction, student-to-student and student-to-teacher, is one of the biggest challenges. Studies show however, that when distance education techniques are used properly, non-traditional interaction can be as effective as the conventional face-to-face interaction (Chernish, DeFranco, Lindner & Dooley, 2005; Howell & Jayaratna, 2000).

Research Study: Rationale and Methods

In view of growing interest in the perceptions of students participating in the transnational programs, a research study was conducted in 2008/2009 to examine the issue of transnational program effectiveness from the ‘client’ (student) perspective. The study involved students in eight transnational computing programs offered in Hong Kong, Malaysia, Singapore, and Vietnam by Australian universities; four-hundred- and-sixty-nine students participated. Table 1 presents a breakdown of student numbers across providing universities, locales, and programs; it also includes information about the mode of study (part-time, full-time) and the mode of teaching (both Australian and local staff are involved in face-to-face teaching, or local staff only).

Table 1: Number of students participating in the study

	Hong Kong	Malaysia	Singapore	Vietnam
University1	Program1 (N=131) part-time	Program2 (N=44) full-time		
University2		Program3 (N=69) full-time	Program4 (N=46) part-time	Program5 (N=33) full-time
University3	Program6 (N=44) part-time	Program7 (N=32) full-time		
University4			Program8 (N=70) part-time	

 Program delivered by both University and local instructors.

 Program delivered by local instructors only.

The choice of locales was deliberate: Hong Kong and Singapore are important markets for Australian transnational programs and are also well-developed territories where English is commonly spoken (Garrett & Verbik, 2003a, 2003b; IDP Education Australia, 2004); hence, students participating in the study were likely to have the benefit of suitable technological infrastructure and adequate linguistic skills. Malaysia and Vietnam were chosen to check if limited technological

infrastructure and language proficiency would have a bearing on student perceptions. Similarly, the choice of computing programs was also deliberate: the intention was to seek the views of students who were technology savvy; hence, they were less likely to have negative perceptions of the use of technology in their programs because of techno-phobia alone.

The programs operating in part-time mode involved students who had previous approved tertiary qualifications. Students were normally in full-time employment and usually studied six subjects per year – two subjects per term. The full-time programs typically involved students who were high school leavers. In the programs where teaching was shared by Australian and local academics, lecturers from Australia were responsible for the design of curriculum, detailed teaching plans, continuous and final assessment, as well as face-to-face delivery of twenty five percent of the programs; local lecturers taught the remaining part of the programs. The programs relied on the Internet for communication, e.g., subject Web sites, bulletin boards, and email. Students met with lecturers and fellow students through face-to-face sessions and benefited from Web-based support between sessions. Programs taught exclusively by local staff followed the curriculum detailed by the *host* university from Australia and accessed online resources provided by the *host* university; however, Australian lecturers did not participate in face-to-face teaching.

Data was collected through a quantitative survey to measure transnational students' perceptions of the relative importance of various attributes of transnational programs. Literature suggests attributes influencing the effectiveness of these programs, and this provided a basis for the development of the survey instrument (Miliszewska, 2006). Firstly, these attributes were identified (attributes relating to transnational computing programs were of particular interest). Secondly, these attributes were grouped into broader categories – dimensions – describing distinctive aspects of transnational education programs. The dimensions included: *Student, Instructors and learning environment, Instructors – Technology and organisation, Curriculum and instruction design, Interaction, Evaluation and assessment, Technology, and Program management and organisational support*.

Student Perceptions of Important Program Attributes

In each dimension, students ranked only the top three attributes that they considered most important to the effectiveness of the program, where 1st indicated *most important*, 2nd – *important*, and 3rd – *somewhat important*; students left the remaining attributes in the dimension without a rank thus considering those *not important*. The overall importance of an attribute within a dimension was obtained from the sum of the reverse-weighted student preferences for that dimension. The 1st, 2nd, and 3rd preferences were weighted as follows: 1st preference was assigned a weight of 3, 2nd preference – weight of 2, 3rd preference – weight of 1, and lack of preference – weight of 0. The overall importance of an attribute within a dimension was obtained from the sum of the reverse-weighted student preferences for that attribute in the dimension. This enabled a simple ranking of attributes, based on a single value, within each dimension.

Student

Students across all programs were in agreement as to the importance of student motivation and self-discipline to program success; in each of the programs, students regarded this attribute as either most or very important. They also perceived the ability to work independently, as well as part of a team, as highly important (Table 2).

Table 2: Dimension *Student*: ranking of attributes

Attribute	University & local instructors				Local instructors only			
	Prog1 HK	Prog6 HK	Prog2 Mal	Prog8 Sin	Prog3 Mal	Prog7 Mal	Prog4 Sin	Prog5 Viet
Works as a team player.	109	47	32	35	57	44	64	34
Has positive attitude towards technology-based learning.	76	67	19	44	55	22	31	10
Is motivated and self-disciplined.	173	55	60	133	101	36	67	30
Is confident in using technology.	78	17	28	21	44	19	18	16
Knows how to work independently.	124	30	44	77	58	27	43	37
Is involved and participates.	89	26	26	27	51	19	20	11
Is willing to ask instructors for assistance.	66	22	27	51	30	14	18	24

-  The most important attribute in the dimension.
-  Second most important attribute in the dimension.
-  Third most important attribute in the dimension.

Instructors and Learning Environment

The rankings in the dimension *Instructors and learning environment* were collected separately for University instructors (only in programs that involved University instructors) and for local instructors (in all programs). With respect to University instructors, students attached the greatest importance to their ability to understand program requirements and students’ needs; effective use of communication skills was rated the second most important attribute (Table 3).

Table 3: Dimension *University Instructors and learning environment*: ranking of attributes

Attribute	Prog1 HK	Prog6 HK	Prog2 Mal	Prog8 Sin
Understands program requirements, students’ characteristics and needs.	141	68	52	95
Encourages students to take responsibility for their own learning.	109	23	18	51
Encourages communication between students, and students and instructors.	128	37	37	43
Demonstrates dedication to program, teaching and students.	97	51	40	74
Uses effective communication skills.	142	54	64	60
Conducts students’ needs assessment and program evaluation.	59	12	11	25
Ensures students’ support services.	48	20	12	27

-  The most important attribute in the dimension.
-  Second most important attribute in the dimension.
-  Third most important attribute in the dimension.

With respect to local instructors (in all programs taught by University and local instructors, as well as those taught by local instructors only), students in all programs agreed that the instructors' understanding of program requirements and students' needs was of utmost importance, as illustrated in Table 4. The same attribute was considered as most important also with respect to University instructors.

Table 4: Dimension *Local Instructors and learning environment*: ranking of attributes

Attribute	University & local instructors				Local instructors only			
	Prog1 HK	Prog6 HK	Prog2 Mal	Prog8 Sin	Prog3 Mal	Prog7 Mal	Prog4 Sin	Prog5 Viet
Understands program reqs, students' characteristics and needs.	166	86	46	92	105	44	62	38
Encourages students to take responsibility for their own learning.	95	14	23	44	45	19	39	30
Encourages communication between sts, and sts and instructors.	119	36	36	52	65	40	41	28
Demonstrates dedication to program, teaching and students.	84	29	37	71	56	13	47	25
Uses effective communication skills.	138	51	61	53	92	38	36	20
Conducts students' needs assessment and program evaluation.	61	8	20	26	25	9	22	11
Ensures students' support services.	58	38	14	26	8	17	11	10

-  The most important attribute in the dimension.
-  Second most important attribute in the dimension.
-  Third most important attribute in the dimension.

Instructors – Technology and Organisation

The rankings in the dimension *Instructors – technology and organisation* were collected separately for University instructors (only in programs that involved University instructors) and for local instructors (in all programs). Students across all evaluated programs unanimously declared University instructors' preparedness for classes and their good organisation as the most important attribute. They were also in agreement regarding the next two most important characteristics, nominating instructors' experience with technology-based programs and the ability to provide well-designed syllabus and presentation outlines. Students were in similar agreement in terms of the least important instructor attribute in this dimension rating the instructor's ability to develop effective graphics as barely important (Table 5).

Table 5: Dimension *University Instructors – technology and organisation*: ranking of attributes

Attribute	Prog1 HK	Prog6 HK	Prog2 Mal	Prog8 Sin
Has positive attitude towards technology.	50	18	23	39
Demonstrates control over technology.	46	6	12	29
Adapts program materials for delivery through electronic media.	57	19	11	23
Has experience with technology-based programs.	80	51	50	55
Is well prepared and organised.	212	73	73	96
Is proficient in instructional design.	48	24	17	41
Uses interactive instructional strategies.	79	29	22	24
Provides well-designed syllabus and presentation outlines.	118	45	25	52
Develops effective graphics.	21	0	2	7

-  The most important attribute in the dimension.
-  Second most important attribute in the dimension.
-  Third most important attribute in the dimension.

With respect to local instructors, students in all programs considered unanimously that first and foremost the instructors should be well prepared and organised; students selected the same attribute as most important with respect to University instructors. Experience with technology-based programs was rated second in terms of importance by the majority of participants (a similar ranking as for University instructors). In terms of the least important attribute, students again were in agreement ranking the local instructor’s ability to develop effective graphics lowest; this was the same lowest ranking attribute as the one related to University instructors (Table 6).

Table 6: Dimension *Local Instructors – technology and organisation*: ranking of attributes

Attribute	University & local instructors				Local instructors only			
	Prog1 HK	Prog6 HK	Prog2 Mal	Prog8 Sin	Prog3 Mal	Prog7 Mal	Prog4 Sin	Prog5 Viet
Has positive attitude towards technology.	63	18	23	35	55	21	36	26
Demonstrates control over technology.	51	26	14	36	16	9	35	11
Adapts program materials for delivery through electronic media.	55	13	18	19	41	13	33	15
Has experience with technology-based programs.	90	41	50	41	69	22	40	31
Is well prepared and organised.	200	84	70	110	119	68	51	33
Is proficient in instructional design.	46	22	20	30	12	4	18	8
Uses interactive instructional strategies.	81	35	18	31	31	17	25	14
Provides well-designed syllabus and presentation outlines.	102	26	14	45	44	25	18	10
Develops effective graphics.	16	1	8	16	9	0	3	1

 The most important attribute in the dimension.

 Second most important attribute in the dimension.

 Third most important attribute in the dimension.

Curriculum and Instruction Design

With respect to curriculum and instruction design, its relevance to job/career was considered the most important attribute by students in all but one of the participating programs, as illustrated in Table 7; only students in Prog8 rated it as the second most important attribute.

Table 7: Dimension *Curriculum and instruction design*: ranking of attributes

Attribute	University & local instructors				Local instructors only			
	Prog1 HK	Prog6 HK	Prog2 Mal	Prog8 Sin	Prog3 Mal	Prog7 Mal	Prog4 Sin	Prog5 Viet
Relates the new material to previous student knowledge.	104	42	28	52	56	38	26	10
Integrates all program elements into a well-paced package.	105	41	35	72	53	27	32	23
Is relevant to job/career.	156	62	62	69	105	39	68	39
Creates logical sequences for each element presented.	91	27	28	56	57	24	46	16
Communicates program objectives and learning outcomes.	125	43	26	53	42	22	39	26
Instructors and students agree on deadlines for completion and marking of assignments.	65	17	34	42	50	21	24	20
Learning objectives are supported by instructional methodologies.	54	31	21	27	33	8	18	16

 The most important attribute in the dimension.

 Second most important attribute in the dimension.

 Third most important attribute in the dimension.

Interaction

Timely feedback on assignments and projects was rated as the most important attribute by most students. Interestingly, students expressed low levels of satisfaction with this very aspect of their current programs (Table 8). Second in overall importance were strategies encouraging communication between students, as well as between students and instructors.

Table 8: Dimension *Interaction*: ranking of attributes

Attribute	University & local instructors				Local instructors only			
	Prog1 HK	Prog6 HK	Prog2 Mal	Prog8 Sin	Prog3 Mal	Prog7 Mal	Prog4 Sin	Prog5 Viet
Timely feedback on assignments and projects.	145	90	62	89	77	61	61	25
Involvement in small learning groups.	118	21	23	53	63	21	40	36
Interactive instructional strategies.	117	59	30	54	68	33	45	16
Frequent contact with the instructor.	101	34	35	52	76	25	37	21
Interaction with instructors through electronic media and telephone.	98	25	18	63	28	10	32	20
Strategies encouraging communication btw sts, & sts & instructors.	122	35	67	61	83	29	43	33

-  The most important attribute in the dimension.
-  Second most important attribute in the dimension.
-  Third most important attribute in the dimension.

Evaluation and Assessment

Students rated highest the assessment of the practical relevance of the program; this corresponds to the high importance rating that the students gave to the relevance of the curriculum and instruction design to job/career (Table 9). The alignment of assessment with learning objectives was also considered important, as was assessment of student attitudes and levels of satisfaction.

Table 9: Dimension *Evaluation and assessment*: ranking of attributes

Attribute	University & local instructors				Local instructors only			
	Prog1 HK	Prog6 HK	Prog2 Mal	Prog8 Sin	Prog3 Mal	Prog7 Mal	Prog4 Sin	Prog5 Viet
Assessment of students' attitudes and levels of satisfaction.	137	61	48	67	96	29	49	26
Assessment of the relevance of program content in practice.	167	59	59	109	81	52	64	43
Methods of assessment match learning objectives.	163	58	60	82	97	51	65	34
Continuous evaluation of students' academic progress.	133	53	31	66	71	24	38	22
Continuous evaluation of the program.	77	33	36	47	51	26	36	25

-  The most important attribute in the dimension.
-  Second most important attribute in the dimension.
-  Third most important attribute in the dimension.

Technology

Availability and reliability of technology was rated as the most important attribute in this dimension by the majority of students. It is worth noting that students in Prog6, Prog2, and Prog3, who rated this attribute as the most important, were also least satisfied with the quality of technical support provided in their current programs (Table 10). Students also rated as important the ease of use of technology.

Table 10: Dimension *Technology*: ranking of attributes

Attribute	University & local instructors				Local instructors only			
	Prog1 HK	Prog6 HK	Prog2 Mal	Prog8 Sin	Prog3 Mal	Prog7 Mal	Prog4 Sin	Prog5 Viet
Current products are used.	101	67	44	71	68	33	58	25
Helpful and easy to use.	194	60	53	91	91	59	63	26
Available and reliable.	183	69	71	89	111	45	69	43
Software applications are appropriate and easy to use.	147	35	43	79	76	19	45	33
Access to technical assistance throughout the program.	64	27	24	44	44	19	23	24

-  The most important attribute in the dimension.
-  Second most important attribute in the dimension.
-  Third most important attribute in the dimension.

Program Management and Organisational Support

With respect to program management and organisational support, timely preparation of program materials was considered important, as was the institution's attention to the high quality of the program (Table 11).

Table 11: Dimension *Program management and organisational support*: ranking of attributes

Attribute	University & local instructors				Local instructors only			
	Prog1 HK	Prog6 HK	Prog2 Mal	Prog8 Sin	Prog3 Mal	Prog7 Mal	Prog4 Sin	Prog5 Viet
Timely preparation of program materials.	129	64	51	76	79	53	50	13
Procedures exist to quickly respond to student complaints.	132	36	27	46	66	24	42	27
Institution ensures high quality of the program.	139	50	44	90	76	27	62	28
Student support services are provided (e.g. student registration, ordering of textbooks)	151	55	43	62	76	23	49	32
Training is provided on accessing program Web sites, electronic databases, etc.	80	25	18	51	40	13	35	31
Effective overall program coordination.	65	31	50	41	55	32	23	19

-  The most important attribute in the dimension.
-  Second most important attribute in the dimension.
-  Third most important attribute in the dimension.

Summary of Critical Program Success Attributes

There was a great degree of agreement on the critical attributes between the students in the eight evaluated programs. In each of the programs, three attributes ranked highest in each dimension were used for comparative analysis between the programs. Table 12 presents a summary of this analysis. In each dimension, only attributes ranked among the highest three in at least six out of eight programs are listed. Since University instructors were involved only in four of the evaluated programs, in dimensions related to University instructors only attributes ranked among the highest three in at least three out of four programs are listed.

Table 12: Student perceptions of critical success attributes

Dimension	Attribute	Program
Student	Is motivated and self-disciplined.	1,2,3,4,5,6,7,8
	Knows how to work independently.	1,2,3,4,5,7,8
	Works as a team player.	1,2,3,4,5,6,7
University instructor and learning environment	Understands program requirements, students' characteristics and needs.	1,2,6,8
	Uses effective communication skills.	1,2,6,8
	Demonstrates dedication to program, teaching and students.	2,6,8
Local instructor and learning environment	Understands program requirements, students' characteristics and needs.	1,2,3,4,5,6,7,8
	Uses effective communication skills.	1,2,3,6,7,8
University instructor – Technology and organisation	Is well prepared and organised.	1,2,6,8
	Has experience with technology-based programs.	1,2,6,8
	Provides well-designed syllabus and presentation outlines.	1,2,6,8
Local instructor – Technology and organisation	Is well prepared and organised.	1,2,3,4,5,6,7,8
	Has experience with technology-based programs.	1,2,3,4,5,6,7,8
Curriculum and instruction design	Is relevant to job/career.	1,2,3,4,5,6,7,8
Interaction	Timely feedback on assignments and projects.	1,2,3,4,5,6,7,8
	Strategies that encourage communication between students, and students and instructors.	1,2,3,4,5,6,7,8
Evaluation and assessment	Assessment of the relevance of course content in practice.	1,2,3,4,5,6,7,8
	Methods of assessment match learning objectives.	1,2,3,4,5,6,7,8
	Assessment of students' attitudes and levels of satisfaction.	1,2,3,4,5,6,7,8
Technology	Is available and reliable.	1,2,3,4,5,6,7,8
	Is helpful and easy to use.	1,2,3,4,5,6,7,8
Course management and organisational support	Timely preparation of course materials.	2,3,4,6,7,8
	Institution ensures high quality of the course.	1,2,3,4,5,6,7,8
	Student support services are provided.	1,3,4,5,6,8

 The most important attribute in the dimension.

Transnational students, irrespective of the origin and type of the program (its offering institution, offshore locale, study mode, teaching mode), were in agreement as to the factors they considered most important to the effectiveness of transnational programs; the extent of agreement was substantial. Students identified the following critical success attributes: (1) the ability of instructors (both, University as well as local) to understand program requirements, student characteristics and needs, as well as their preparedness for classes; (2) the relevance of the program content to job/career; (3) timely provision of course materials and feedback on assessment tasks; and, (4) availability and reliability of technology.

Conclusion

Student perspectives outlined in this article were collected with the notion in mind that, as the ultimate clients of an education program, students should participate in defining what constitutes its effectiveness. The article offers an insight into learners' perceptions of their educational beliefs by providing a detailed account of the wide range of factors that might have influence on those perceptions.

Research on the effectiveness of transnational education faces the dilemma that the educational context is not homogenous, as it involves different types of educational providers, students, and partner institutions across many countries, and it includes a variety of program delivery models. In addition, the educational context is constantly evolving due to the introduction of new technologies and, resulting from it, the introduction of new ways of teaching and learning.

The findings reported in this article show that transnational students from eight different undergraduate computing programs in South East Asia are in agreement as to the factors they consider most important to the effectiveness of transnational programs. The findings also seem to support the premise that technology represents but one dimension of the transnational education context, and that other dimensions also contribute to program effectiveness. This article provides support for investigating effectiveness of transnational programs in that, irrespective of how the educational context may change in the future, the fundamental factors that impact learning and success have been identified by 'clients': the transnational students themselves.

Given the information contained in this article, it is evident that to improve and sustain transnational programs in the future, it is essential for universities to gain an understanding of the learners' perspective: an understanding that transcends attendance records and academic achievements. The findings reported in this article provide a framework to assist in making informed decisions in the design, development, and review of transnational programs.

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