

ELICITING THE BELIEFS OF PROBATIONARY STUDENTS ABOUT THEIR ATTENDANCE OF PASS WITHIN THE INTEGRATED BEHAVIORAL MODEL FRAMEWORK

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Abstract: **Purpose** - The primary purpose of this study is to explore how Peer Assisted Study Sessions (PASS) are perceived by underperforming students at the American Degree Program in view of their irregular attendance and poor CGPA. **Methodology** - Driven by the Integrated Behavioral Model framework, this qualitative formative research used interview elicitation procedure to identify and understand the antecedent beliefs underlying the determinants of behavior of probationary students at a private institution of higher learning in Malaysia, with regard to their attendance or non- attendance at PASS. The responses were content analyzed to develop insight into the underlying beliefs of attendees and non-attendees as well as a comparative analysis of the two groups. **Findings** - The findings showed remarkable difference between the two groups in the underlying beliefs on two dimensions of the model; attitudes and perceived norms while there was limited overlap on the dimension of personal agency. **Significance** - The insights of the study have significance for the PASS community especially the PASS trainers, the PASS leaders and generally educational institutions. Interventions suggested including metacognitive skills and Design Thinking training for PASS Leaders. The underlying beliefs serve as the basis of quantitative measure of IBM dimensions in the context of Malaysia.

Keywords: Integrated Behavioral Model, Peer Assisted Study Sessions, Probationary Students, Non- Cognitive Interventions, Elicitation Process

Introduction

Peer Assisted Study Sessions which originated as Supplemental Instruction (SI) in the University of Missouri-Kansas City in 1973 is offered today in higher education institutions across the globe in various forms and names - Peer Assisted Learning Strategies (PALS) and Peer Led Team Learning (PLTL). These peer learning programs are sessions in which students learn with and from each other without direct intervention of teachers. Much research literature on PASS in higher education boasts about its wide-ranging benefits – namely improved student

retention and better course grades. The PASS program generally targets difficult academic courses which often register high rates of failure or withdrawals and provides weekly scheduled, out-of-class, peer-facilitated sessions that offer students an opportunity to discuss and manage course information more effectively. PASS thus avoids the remedial stigma often attached to traditional academic assistance programs since it does not identify high-risk students but identifies high-risk courses instead. PASS sessions are open to all students enrolled in the course, are free of charge and attendance is on a voluntary basis.

The PASS program was introduced at a private higher education institution in Klang Valley Malaysia in 2006 to assist students in their academic performance in courses that register high failure rates, high attrition rates or regarded as challenging by students. PASS sessions have since been introduced for 17 courses in the program. Each face - to - face PASS session of an hour a week is facilitated by a successful senior student - typically a student who has attained outstanding results in that course and exhibits excellent communication and interpersonal skills. Although the program has proven to be successful, there are concerns that only certain groups of students attend the PASS sessions while others (especially students who are underperforming in the program – i.e. CGPA below 2.0) stay away from these classes. Thus, the objective of this study is to identify the belief patterns of underperforming students in terms of Attitude, Perceived Norms and Personal agency- the components of Integrated Behavioral Model. By eliciting their beliefs underlying the above-mentioned components, we aim to develop an insight into the affective, cognitive, social and personal factors that influence their intention to attend PASS. We aim to eventually work at an educational intervention to benefit the students by attending PASS.

Literature Review

Over the past two to three decades, numerous studies have been conducted to gauge the effectiveness of PASS on students' success, university attrition rates, peer leaders and academic performance etc. Studies that have predominantly centered around the overall effectiveness and evaluation of the PASS programs in various institutions worldwide – University of Minnesota (Arendale, 2014); University of Queensland (Kimmims, 2014); University of Wollongong (Paloyo et al., 2016); Monash University Malaysia Campus (Patel, Saipul & Chan, 2017) and subjects - accounting (Dobbie, 2009), calculus (Fayowski & MacMillan, 2008), physiotherapy (Sole et al., 2012) and statistics (Baum & Samples, 2016) to mention a few, have generally reported that PASS initiatives have benefitted the various stakeholders despite some challenges in the implementation process.

Many of these studies assess the effectiveness of PASS by comparing attendee and non - attendee grades. Higher attendance in PASS has been reported to show improvement in course grades. Studies by Wilmot and Telang (2017), Hoi and Downing (2010), Durfee et al. (2012), Miles et al. (2010), Malm, Bryngfors and Morner (2011), Price et al. (2012) report this, hence, emphasize the importance of attendance in PASS classes. Research using the Theory of Planned Behavior Model incorporating role identity has also been conducted by White (2008, 2011) and Goldstein (2014). Although these studies acknowledge the importance of attendance, few have used the qualitative elicitation process afforded by the Integrated Behavioral Model to focus on the underlying beliefs that influence students to attend or not attend the PASS sessions offered at their institutions.

Theoretical Model

The study required a theoretical framework to systematically explore the underlying beliefs of the students. Dawson et al. (2014) have also noted that there was a deficiency of qualitative studies that were theoretically grounded. A number of theoretical models attracted the attention

of the authors – Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), Integrated Behavioral Model (IBM), self-efficacy theory and self-determination theory. A multicomponent model was adopted based on the Integration Behavioral Model (IBM), guided by TPB. This integration capitalized on the flexibility afforded by Ajzen and others that TPB was open to the inclusion of additional components if they served an explanatory purpose. IBM incorporates and extends TPB by including more specific factors for predicting and understanding behavior, for example, the construct ‘Perceived Behavioral Control’ takes into account two separate measures – self-efficacy and perceived control, thus making it more comprehensive. This specificity is important when belief identification is the primary objective. Many studies using IBM as the theoretical framework have successfully predicted behavior and suggested interventions especially in the field of health behaviors, binge drinking and road safety etc.



Figure 1: The Integrated Behavioral Model

The comprehensive Integrated Behavioral Model has the following constructs:

Intention

This construct is central to TPB and IBM in order to predict behavior. Intentions refer to the motivational factors, without which a person is not likely to carry out the target behavior.

Attitude

Attitude is defined as an individual’s favorableness or unfavorable-ness towards performing the behavior. The IBM model sees attitudes as composed of affective and cognitive dimensions (Triandis, 1980, Fishbein. 2001 and French et al., 2005). The affective dimension refers to the individual’s emotional response towards performing the recommended behavior which is labelled as experiential attitude. When beliefs are determined by outcome of behavior, they are thus instrumental attitudes and are based on cognitive evaluation of the target behavior.

Perceived Norm (PN)

Perceived norm refers to the individual’s normative beliefs – his/her perceptions of what other’s expectations are and his/her motivation to comply, in other words the social pressure the

individual feels. This is termed injunctive norm (IN) in the IBM model. Another addition to PN is descriptive norm (DN) which refers to whether the referents (especially the significant ones) actively perform the target behavior. This could capture the normative influence of the in-group and that of social identity (Bagozzi & Lee, 2002; Triandis et al., 1988).

Personal Agency (PA)

Personal agency consists of two subcomponents, Bandura's concept of self-efficacy and perceived control. Self-efficacy is one's degree of confidence in the ability to perform the behavior even in the face of various obstacles or challenges, whereas perceived amount of control over behavioral performance is determined by one's perception of the degree to which various environmental factors make it easy or difficult to carry out the behavior (Montano & Kasprzyk, 2008).

A few other variables of IBM were not considered relevant as they directly impact the behavior while this study aims at exploring the underlying beliefs of the main constructs (attitude, personal norm and personal agency) that determine the intentions, as this model assumes a causal link between beliefs underlying attitudes, perceived norms and personal agency to behavioral intentions and behavior. These underlying beliefs vary with differing populations. Thus, this study explores the beliefs unique to the probationary students with regard to their attendance of PASS.

The recommended approach, the belief-elicitation procedure uses open – ended questions about how the students feel about attending PASS, how they think it would benefit them (attitude), whose opinion would be important for their attendance (perceived norms) and what would make it easy or difficult to attend PASS (personal agency). Thus, to extend the descriptive and explanatory utility of the research, direct elicitation studies of student population is warranted which has not really been attempted before (Darker et al, 2007).

Methodology

The researchers obtained a list of probationary students from the academic office and used the convenience sampling approach, guided by a set of criterions, to request student participation in this project. Students who subsequently agreed to participate in the data collection process were requested to sign a consent form prior to the interview which explained the purpose of the study and emphasized the confidentiality of participant identity and his or her responses. The researchers then adopted the elicitation interview format according to a topic guide that was already aligned to the integrated behavioral model in order to gather a detailed account of the interviewees' experiences with PASS sessions. Students who indicated that they had attended more than 2 PASS classes were categorized as attendees of PASS whereas students who attended less than 2 PASS classes or none at all were categorized as non-attendees.

A total of 20 interviews were conducted, recorded electronically and transcribed. Each interview was between 30 minutes and 40 minutes in duration and upon transcription, the interview data in total comprised approximately 240 pages of transcripts. Of the interviewees, 12 were categorized as attendees whereas 8 fell into the category of non-attendees. The interview data was then anonymized in order to ensure confidentiality on the part of the interviewees and the persons, courses or stakeholders that they referred to in the interviews. The data was subsequently content analyzed by delineating units of general meaning and then the deductive category of the IBM was applied. The researchers read through the many pages of transcripts and identified the parts of the transcript that could be coded with the designated categories – Beliefs Underlying Attitudes, Perceived Norm and Personal Agency.

Results

Most studies using TRA, TPB and IBM have attempted to verify the theory, but the present study explores and compares the beliefs underlying attitudes, perceived norm and personal agency between probationary students who attend PASS and those who do not and whether their attendance or non- attendance can be attributed to different belief patterns.

Beliefs Underlying Attitudes

For experiential and instrumental attitudes, both their affective (feelings) and cognitive beliefs were explored with regard to their likes and dislikes of attending PASS, atmosphere in the PASS session, change of perception (after attendance), perception of benefits or disadvantages of attending and what worked for them and what did not work for them at PASS.

Responses of the Attendees: Experiential dimension of Attitudes

Both numerically and qualitatively, the responses of the two groups of students were distinct with a few areas of overlap. Twelve attendees gave 34 positive and 23 negative responses in comparison to 7 non- attendees who gave 9 positive and 19 negative responses with reference to how they feel about attending PASS. The experiential responses of the attendees were quite positive; “good experience”, “interesting”, “feel comfortable with friends”, “good collaboration with peers”, “helpful”, “useful”, “prefer peer teaching as they can share our problems.”

Responses of the Non-attendees: Experiential dimension of attitudes

The non-attendees found PASS attendance, “unnecessary”, “not given it much importance”, “don’t enjoy going”, “repetitive”, “too noisy”, “working at question after question is too tiring”, “discouraged”, “first I thought it was fun but as it got harder it was not fun”, “nervous at first”, “a bit disappointed” or “I feel neutral”, the non-attendee’s most positive response was that, “it was pleasant because the PASS leader was a friend.”

Responses of the attendees: Instrumental Dimension of Attitudes

The underlying beliefs with regard to instrumental attitudes could be categorized as those which were general for PASS practice and those which were specific to subjects. The general beliefs of attendees about PASS listed “I actually learnt something”, “understood subject matter better”, “more confident about chapters I went for”, “definitely helpful and definitely good”, “students get support and can learn for free”, “leaders get benefits from working with us and we benefit by attending”, “friends can help each other”, “useful”, “it works”, “PASS validated the knowledge I had”, “helped revise”, “my confidence improved”, “helps boost my marks”, “more opportunity to ask questions.” The two general negative comments were “too many students” and “not enough interaction.”

The more revealing comments stem from subject specific beliefs. For English, the attendee category had positive remarks; “Good because focused on problems student had with locating content”, “structuring essay”, “PL would review and guide”, “help in the format”, “attended almost all classes for English”, “get feedback on my work.” For other subjects like Chemistry, the responses were; “PASS works for Chemistry because can be interactive”, “It’s going well for Chemistry.” For Theatre and Physics, - “I know where the class was going”, “I was reluctant to do all the extra work but never regretted it because I had good marks for the test - never missed a single physics class.”

The most number of negative beliefs were about calculus even among the attendee group: “No recap”, “the PL prepares difficult exercises - too difficult can’t benefit from it because don’t understand the basics”, “does not work for Math”, “you have to have fundamental understanding first”, “for Math, I feel I need individualized help”, “too many students”, “you

still have to practice on your own”, “feel uncomfortable to ask questions”, “I was weak in Math and so going to PASS was a waste of time”, “doing a lot of hard questions”, “stressed me a lot”, “I can’t work quickly on math problems”, “I need to settle that first.”

Responses of the Non-attendees: Instrumental Dimension of Attitudes

The non-attendee group also had more problems with Math “too tiring to do question after question”, “the PL knew Math but had problems with his English as he could not explain although he could solve the problem”, “my Korean friend also could not understand”, and more generally “I would not learn much if I go … only useful if you don’t know what’s happening in class.” I prefer working on my own, if people are talking around me I get distracted’ ‘, “it does take away time.” “if a teacher was leading the session I would go.” This resonates with what Chambers-Turner (2017) found, “students prefer resources led by individuals with a high level of expertise.” The positive responses from non-attendees included, “PASS is helpful” , “I go when I don’t understand what’s happening in class”, “helps if the PL is friendly and does not treat me like a student”, “it helped me for Calculus”, “understand the equation and the different steps” and “you can ask questions or even learn when others ask, so quite helpful.”

The Face-off between the Attendees and Non-attendees

The comparison of the attendee and non-attendee probationary students clearly reveals very different beliefs underlying their attitudes. The attendees definitely have more positive and motivated beliefs about attending PASS which get translated into the intention to attend “I will prioritize going to PASS” and “I intend to go more regularly,” whereas the beliefs of the non-attendees reflected laziness, an unwillingness to commit the extra time, or the presence of other distractions. These beliefs were often correlated with lack of intention to attend, “I am not thinking of attending” and “depends on my mood.”

Other than the beliefs of students, the nature of subjects emerges as a significant variable. Both groups do not deem Math sessions as very helpful because of a lack of fundamental Math skills and their perception that it does not lend itself to collaborative learning. There seems to be an inverse relationship between how much students know and how much they benefit from PASS. If they know too little it does not work and if they know too much it may not work. English fluency is another concern with both PL and students and it gets more pronounced with international students.

Beliefs Underlying Perceived Norm

A person’s perceived norm is determined by his/her normative beliefs - whether his important referents approve or disapprove of the behavior, weighted by his motivation to comply with these referents - injunctive norm (Montano & Kaszyk, 2008). Descriptive norm refers to what the referents do which could exert normative influence.

Responses of the Attendees: Injunctive Norm Dimension of Perceived Norm

The attendee group’s responses indicated that the referents mattered in their attendance of PASS, 7 out of the 12 attendees acknowledge the influence of friends and seniors, 4 mentioned the important role of lecturers and advisors. Parents were barely mentioned twice. The powerful influence of peer group is revealed in responses like “friends ask me to come and I do go because of them”, “if my friends are going it will encourage me, maybe I will attend”, “because they are close to me, only my friends and myself can convince me to attend.” Lecturers and advisors do have some sway over the students, “when my lecturers and advisors tell me to attend, when I am doing poorly, I respect them - so I go for PASS”, “lecturer recommendation matters the most, then parents”, “my advisor suggested I attend PASS when I had missed a few

classes and I went”, “actually if seniors and lecturers tell me to go, I will go.” There is thus ample evidence of importance of referents.

Responses of the Attendees: Descriptive Norm Dimension of Perceived Norm

The descriptive norm, which refers to what the referents do, is well evidenced in their responses, “if my friends go, I will go with them”, “if my friend was in the same class as me, if we go together, I would be a lot more comfortable”, “when the friends that I am studying with go for PASS class, it would make me go”, “if successful seniors went I would follow”, “when I observe my friends who are doing well, go to PASS, I feel if they can do it, I can too.” Equally friends can exert negative influence, “friends could discourage me from going, they can tell me to have fun with them”, “if a friend says I never go to PASS but he still does well, it might make me skip a class or two.” Though the majority demonstrates the significance of peer affiliation, there was one who remarked “I go alone to PASS... I would like some friends to follow but they don’t want to put in the extra effort.”

Responses of the Non-attendees: Injunctive Norm Dimension of Perceived Norm

Four out of eight non-attendees revealed some immunity to the influences of the referents; “it is not going to influence me”, “one or two of my friends go but they know better than to ask me to come along”, “my lecturer, advisor and friends did ask me to go to PASS and work harder but I did not do much I guess”, “if the lecturer was conducting the PASS session, I might go.” While 3 other non-attendees seem to be easily persuaded by seniors and lecturers; “they tell me to go, I will go”, “if my friends tell me to go”, “I go but their major is different.”

Responses of Non-attendees: Descriptive Norm Dimension of Perceived Norm

Descriptive norm was reflected in the following responses; “more than what friends tell me”, “it is more like since everyone is going”, “I might as well just follow” but another non attendee differed when he said, “at times it is also when you really don’t understand I would go even if my friends don’t.”

The Face-off between the Attendees and Non-attendees

The striking difference between the attendees and non-attendees is that referents especially the peers hold great sway over the attendees whether positive or negative, while four out of eight non-attendees demonstrate indifference or are quite immune to any such referent influence, but the other three non-attendees were quite susceptible to the influence of their peers. This comparison applies to both injunctive and descriptive norms. Referents matter, although perceived norms have not been explicitly mentioned in the intentions by many attendees and non-attendees, yet the powerful influence especially of the peers, consciously or unconsciously shows in their responses mentioned above.

Beliefs Underlying Personal Agency

Personal Agency is indicated by perceived control beliefs and beliefs about self-efficacy. Perceived control concerns “the presence or absence of facilitators and barriers to behavioral performance, weighted by their perceived power or the impact of each control factor to facilitate or inhibit the behavior” (Montano & Kaszyk, 2008).

Responses of the Attendees: Perceived Control Beliefs Dimension of Personal Agency

When responding to what facilitates or hinders them from attending PASS - the attendees mentioned about 14 barriers to attending and only 4 facilitators. The barriers included other commitments like “I love sports - involved in Crimson League and futsal practices”, mentioned “the long wait for PASS sessions”, “time they could use to catch up on sleep or hang out with friends”, “too busy”, or if they “have a class right after PASS”, and negative perceived value

of PASS like there being “too many students” or “sessions are not specific enough.” Distance to travel to campus seemed an important barrier. Thus, it is easier to attend PASS if they lived on campus. Transport problems were cited by a few as discouraging factors. The few facilitator factors included, “if the PL is a friend” or “if the PASS schedule suits them”, as well as “living on campus.” Some demonstrated perceived power over both facilitators and barriers for eg. even when they felt the pressure of other more enjoyable commitments, they made decisions to attend PASS, for example even after a long day of futsal matches, they ‘did not feel too tired to attend PASS’.

Responses of the Non-attendees: Perceived Control Beliefs Dimension of Personal Agency

The responses of the non-attendees contained more barriers but were quite similar to the attendees, the main concerns were again timing, other commitments, low energy after sports, other distractions like cyber cafes, gaming, sleeping late and oversleeping. PASS sessions before tests are seen as inconvenient, and the perceived negative value of PASS discouraged them from attending PASS. The facilitators for the non-attendees are “when the class finishes in time and there is just half an hour break before PASS” that is seen as optimum timing. Another facilitator is “free time”, “when friends are busy so go to PASS - not very intentional.”

Self-efficacy: Dimension of Personal Agency

Beliefs about their self-efficacy, which refer to how competent one feels on a task, are likely to influence whether the students would initiate attending PASS and whether they will persist in attending the sessions.

Responses of the Attendees: Self-efficacy Dimension of Personal Agency

Among the attendees there were more positive assessments of their own self-efficacy to attend PASS than negative assessments of self-efficacy; “if I decide to go, I will go.” Often their proficiency or lack of it was the deciding factor for attendance - “my Math skills are below par so I need more support so I will go”, “I am struggling in English so I will go but Math is fine so I am not going for that subject” while others resolve to go only after disastrous results; “initially I was not very consistent but after the terrible results in the last two months I have been quite regular for both physics and Calculus”, others confirm its their own beliefs, “it’s up to me and I want to go as I want to do well”, “I would try my best to go unless there is an emergency.”

The negative beliefs about self-efficacy were qualified by a desire to make amends; “I have not been behaving in a very responsible manner, but I want to change” and “I am trying to defeat my negative thoughts about attending.”

Responses of the Non-attendees: Self-efficacy Dimension of Personal Agency

Non-attendees do not have positive self-efficacy beliefs or are struggling to develop a sense of self-efficacy for example “I have just been lazy”, “if I am O.K. with a subject and my friends want me to go with them I do go with them”, “generally it’s up to me but if my family comes or something else comes up, I would not go to PASS class”, “I would try not to get influenced by friends to not go” and “I try to be disciplined, I want to do well, I don’t know why, I think it is a kind of laziness.”

The Face-off between the Attendees and Non-attendees

The views of both the groups about perceived controls - the facilitators and barriers to attending PASS coincided with only a few quantitative differences. The non-attendees claimed more barriers and confessed to more distractions than the attendees.

On the self-efficacy dimension, generally the attendees feel self-efficacious about attending PASS or are aware that they need to become more self-efficacious as do some non-attendees who would also like to be more disciplined, but most other non-attendees do not demonstrate any sense of self-efficacy.

Discussion

This elicitation study aimed at comparing the relevant underlying beliefs of the attendee and non- attendee probationary students according to the framework provided by IBM. There were clear differences between the groups with regard to beliefs underlying attitude and perceived norms. There was a much greater overlap on the perceived control dimension of personal agency, but this similarity did not extend to self-efficacy, the second dimension of personal agency.

Looking into the Beliefs Underlying Attitudes

The affective beliefs underlying the experiential attitudes contrasted quite sharply between the two groups (the attendees and non-attendees). The attendee group's experience of PASS could be summed up as enjoyable and interesting while the non-attendee group felt it was repetitive, noisy and tiring. The learning atmosphere of the PASS was perceived by the attendees as conducive to learning, collaborative and they showed a preference for peer learning while the non-attendees found the presence of others distracting. The relevant beliefs of attendee group for instrumental attitude reveal PASS as providing cognitive facilitation because it helped them get a better grasp of the subject matter, the non-attendees found all the exercises during PASS to be tiring and even discouraging. The attendees believed to have benefitted psychologically as PASS boosted their self-esteem, gave them confidence and validated their knowledge. On the other hand, the non-attendees felt they could not learn much and found it time consuming and it only helped if the PL was friendly. Brown et al. (2014) have mentioned the importance of the role the PLs adopted and discussed the challenges of negotiating directive teaching roles versus facilitative roles. The role the PL adopts matters significantly more to the non-attendees but the only point of overlap was the negative beliefs about Math PASS sessions. This is easily explained as both the attendees and non-attendees had inadequate Math skills. Both the groups preferred the Math PASS sessions to start with the fundamentals of Math and would have liked individual help. In comparison to Math, they were more satisfied with English PASS sessions as the PL focused on student problems, provided feedback and guided them whereas in Math the emphasis was on practice and the PL did not address the lack of fundamental skills and problems of speed (time management). Although both groups had problem with Math, the non-attendees had additional problems like showing lack of mental stamina (finding it tiring), language problems and even their perception of the relationship with the PL. Chambers-Turner (2017) has noted in her review that achievement gains in the students attending PASS may be due to relationships between the PLs and the students.

Many studies have questioned the correspondence between attitudes and behaviour, unless the level of specificity between the two is very high. Since evaluative beliefs are the very basis of attitude, it is necessary to point out that interview questions were kept very specific to their likes and dislikes of PASS and their perceptions of how much they benefit from these sessions. Thus, it would be safe to assume that the more positive beliefs of the attendee group probably contributed to their better attendance.

Looking into the Beliefs Underlying Perceived Norms

Referents definitely matter to all the attendees and to some non-attendees. The importance of peers from among the various referents is in line with predictions of social identity theory

(Tajfel and Turner, 1979). The students behaved in accordance with their in-group because the in-group (their friends) are attributed with positive characteristics (friendly, fun and nice). The peer group is also significant because it provides both emotional and instrumental support. Literature suggests that the peer group exerts important influence although the influence could be both positive and negative. If the group is friendly and the PL is facilitative, social congruence becomes an asset to learning dynamics of the session (Berghmans et al., 2012)

Group membership is also linked to identity exploration and defines the student's role for them. Researchers have provided evidence to suggest that role identity adds significantly towards the prediction of behavioral intentions (Biddle, Bank & Slavings, 1987; Terry, Hogg and White, 1999; White et al., 2008) have actually added role identity to the framework of TPB to study PASS attendance which testifies actually towards the importance of perceived norms in the present study. The influence of referents (positive or negative) on attendance is considerable as discussed in the results, but more than half of the non- attendees were indifferent to this influence which sets them apart

Looking into the Beliefs Underlying Personal Agency

The responses of both the groups were remarkably similar on the dimension of perceived control, especially what they both believed constituted barriers to their attendance except that the non-attendees had additional problems (oversleeping and gaming). They also differed in their feelings of self-efficacy. The attendees showed some confidence in their ability to both go to PASS and persist in going 'if I decide to go, I will go' those who are not that positive want to make an attempt – "I am trying to defeat my negative thoughts about attending." In this respect, the non-attendees also are trying to make amends - "I try to be disciplined", "I want to do well", but with not much success as shown by their attendance. The attendees demonstrate self-efficacy to a greater extent, that is the reason why although both groups perceive similar barriers to attendance, the attendees could do comparatively better as Bandura has pointed out that perception of self-efficacy can influence which challenges people tackle and how well they perform. Studies have found that feelings of greater self-efficacy are associated with reduced procrastination and (Steel, 2007), greater adherence to exercise regimen (Ayotte et al., 2010) and higher levels of academic performance (Weiser and Riggio, 2010).

Of course, the beliefs underlying attitudes and the perceived norms are also more positive for the attendees and all the different dimensions interact to determine the intention and target behavior. Other studies have also supported the relative importance of attitudes and perceived norms in comparison to perceived control in supplementary instruction (Goldstein, 2008)

Conclusions and Recommendations

The discussion may be concluded with the following points of interest. The different and characteristic belief patterns of the two groups allow us to argue that although somewhat similar in their cognitive ability (as evidenced by their probationary status), their motivation and other non-cognitive factors like locus of control and self-efficacy are different which significantly influence their PASS attendance. In addition, the different PASS courses do not lend themselves to 'one size fits all'. These students have claimed to benefit from the collaborative and interactive nature of PASS sessions for English language, Theatre and Chemistry courses but Math is perceived more as an individual endeavor. Perhaps that is because of their inadequate aptitude and weak fundamentals which require more individual attention. Furthermore, the Math PASS leaders' belief, in the 'practice makes perfect' strategy, make them oblivious to the more fundamental problems faced by the underperforming students.

The authors recommend that since the non –cognitive factors have been shown to play an important role, the students, especially the non- attendees, be guided by educational interventions to foster self-monitoring and self-regulation to improve their metacognitive skills. Other interventions should include instruction on academic goal setting, time management, stress management and self-evaluation. It is suggested that the PASS peer leaders should be introduced to the design thinking process so that they can discover the needs of their students, empathize with their problems and provide solutions accordingly. A strong recommendation is for the PL training to be specifically discipline oriented. This is supported by an observation by Stone and Jacobs (2008) that PASS usually focuses on general strategies more specific to individual disciplines. From the methodological perspective, the elicitation process incorporated into IBM is recommended to develop empirically based insights into culture sensitive phenomenon before developing objective measurements and interventions.

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